SERVICE MANUAL

FISHER

CR-4140

Two kinds (Black and Silver) of Front Panels including Knobs are used in CR-4140. As they are classified in Exploded Views and Parts Lists, please refer to them.

Stereo Cassette Deck with Metal Tape Capability, Solenoid Operation and DOLBY Noise Reduction System

(EUROPE)

THE FIRST NAME IN HIGH FIDELITY

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SPECIFICATIONS

Power Source	AC 120/220V (50/60Hz)
Power Consumption	37W
Recording System	AC Bias
Erasing System	AC Erasing
Tape Speed	1-7/8 ips. ±1.5%
Wow & Flutter	0.06% WRMS
Torque	
Playback	30 - 70g-cm
Fast Forward	50 - 120g-cm
Rewind	50 - 120g-cm
Fast Forward Time	110sec. (with C-60 cassette tape)
Rewind Time	110sec. (with C-60 cassette tape)
Frequency Response (Overall, DOLBY : OFF)	
Fe_2O_3 (±3dB)	30 - 12kHz
CrO_2 (±3dB)	30 - 14kHz
Metal (±3dB)	30 - 14kHz
Signal to Noise Ratio (According to CCIR method: Weighted, DOLBY : ON)	
Fe_2O_3	46dB
CrO_2	46dB
Metal	48dB
Signal to Noise Ratio (According to CCIR method: Weighted, DOLBY : OFF)	
Fe_2O_3	52dB
CrO_2	53dB
Metal	56dB
Erase Ratio (Overall)	
Fe_2O_3	66dB
CrO_2	66dB
Metal	66dB
Crosstalk (with Fe_2O_3)	
Track to Track	66dB
Channel Separation (with Fe_2O_3)	36dB
Harmonic Distortion (K3)	
Fe_2O_3	2.0%
CrO_2	2.0%
Metal	2.0%
Input Sensitivity and Impedance	
Microphone	0.3mV/10k-ohm
LINE IN	70mV/50k-ohm
Output Level and Impedance	
LINE OUT	480mV/2k-ohm
Headphone	30mV/8ohm
Oscillation Frequency	105kHz
Dimensions (W x H x D)	440 x 100 x 270mm
Weight	6kg

–Specifications subject to change without notice.–

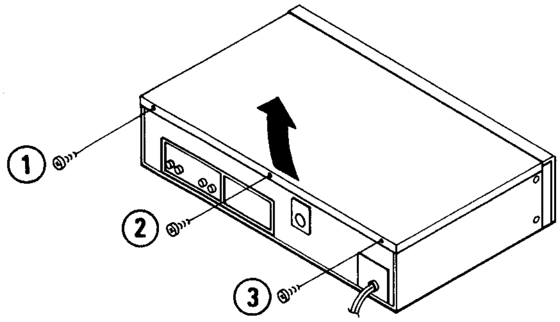
DISASSEMBLY INSTRUCTIONS

GENERAL REMARKS

Before disassembling the unit, spread a soft cloth on a rubber mat on the work bench to avoid scratches and grease spots. Reassemble the unit correctly noting the kinds of fastening screws and leads. Refer to the circuit diagrams and exploded views.

COVER REMOVAL

1. Remove three screws (1 – 3) fastening the Cover.



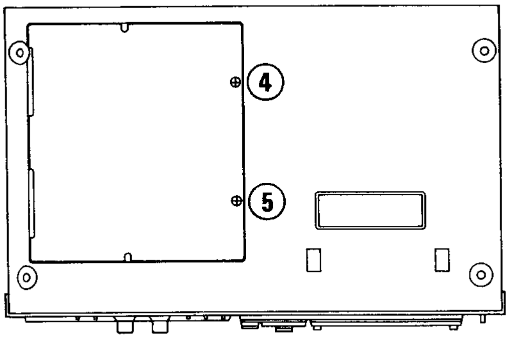
2. Remove the Cover by lifting it.

3. Reassemble in reverse order.

SHEET PANEL REMOVAL

1. Turn the unit over onto a clean soft surface.

2. Remove two screws (4 and 5) fastening the Sheet Panel.

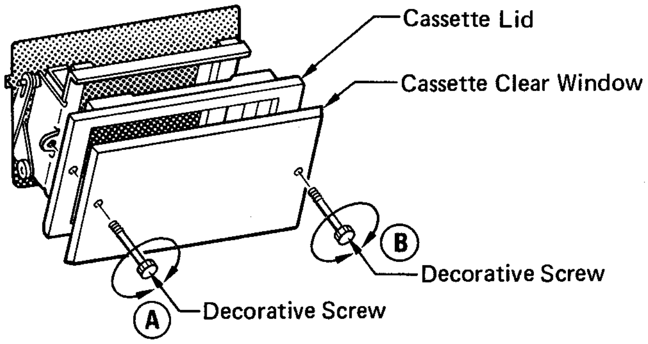


3. Remove the Sheet Panel by lifting the screw-tightened side of the Panel.

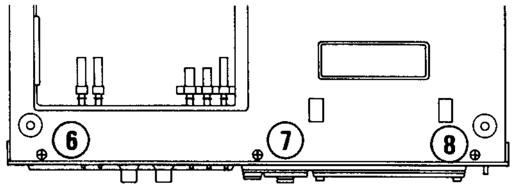
4. Reassemble in reverse order.

FRONT PANEL REMOVAL

1. Remove the Cover and open the cassette holder by pressing the Eject button. Remove two decorative screws (A and B), the Cassette Clear Window, and the Cassette Compartment Lid as illustrated.

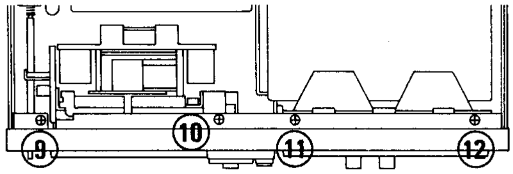


2. Disconect the Connector (CN1) from the Control P.C.Board and turn over the unit. Remove three screws (6 – 8) fastening the lower side of the Front Panel and turn over the unit again.



3. Remove four screws (9 – 12) fastening the upper side of the Front Panel. Then, remove the Front Panel from the unit.

NOTE:
The Function Switch Keyboard is mounted on the Front Panel.

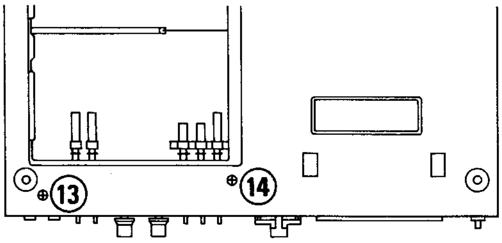


4. Reassemble in reverse order.

CHASSIS PANEL REMOVAL

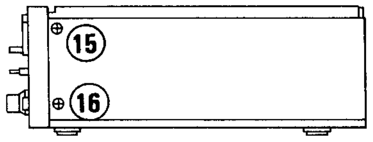
Meter, three Indicator P.C.Boards, Volume P.C.Board for input level controls, and two microphone jacks are mounted on the Chassis Panel.

1. Remove the Cover and Front Panel and turn over the unit. Then, remove two screws (13 and 14) fastening the lower side of the Chassis Panel.



DISASSEMBLY INSTRUCTIONS (Continued)

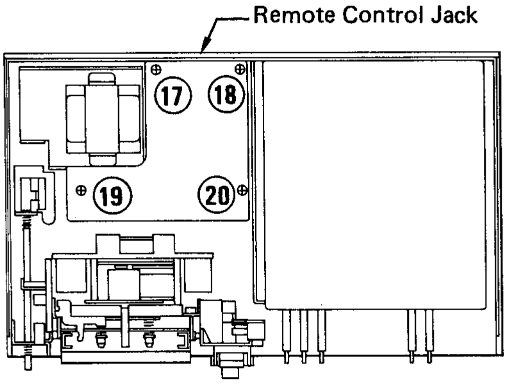
2. Turn over the unit again and remove two screws (15 and 16) fastening the side of the Chassis Panel.



3. Remove the Chassis Panel, noting the leads and Switch Buttons.
4. Reassemble in reverse order.

CONTROL P.C.BOARD REMOVAL

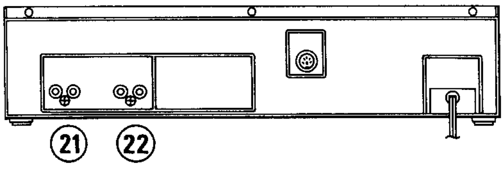
1. Remove the Cover and disconnect four Connectors (CN1 – CN4) from the Control P.C.Board. Then, remove four screws (17 – 20) fastening the P.C.Board.



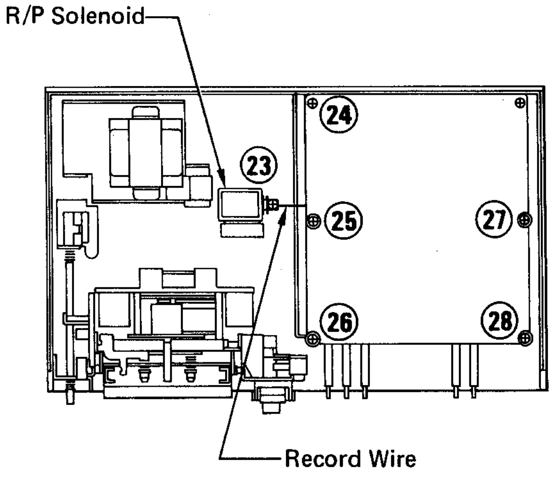
2. Remove the Control P.C.Board by lifting the remote control jack side of the P.C.Board, noting the lead wires.
3. Reassemble in reverse order.

AMPLIFIER P.C.BOARD REMOVAL

1. Remove the Cover, Front Panel, Control P.C.Board, and Chassis Panel by following the instructions given previously.
2. Remove two screws (21 and 22) fastening the Line Jacks on the rear of the unit.



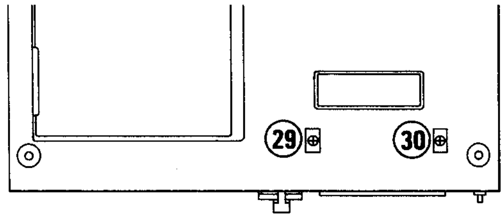
3. Disconnect the Record Wire from the R/P Solenoid Plunger by removing the screw (23).
4. Remove five screws (24 – 28) fastening the Amplifier P.C.Board. Then, carefully remove the Amplifier P.C.Board by lifting it off, noting the lead wires.



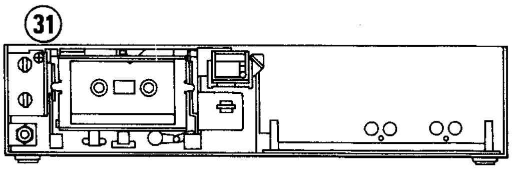
5. Reassemble in reverse order.

MECHANISM CHASSIS REMOVAL

1. Remove the Cover, Sheet Panel, and Front Panel by following the instructions given previously.
2. Remove two screws (29 – 30) fastening the lower side of the Chassis.



3. Disconnect three Connectors (CN2 – CN4) from the Control P.C.Board and the Connector (CN5) from the Amplifier P.C.Board.
4. Remove the screw (31) fastening the Chassis. Then, remove the Mechanism Chassis from the unit, noting the lead wires.



5. Reassemble in reverse order.

MECHANICAL ADJUSTMENTS

EQUIPMENT REQUIRED

- Phillips screwdriver
- Flat-bladed screwdriver
- A pair of round-nose pliers
- A pair of nippers
- Cassette Tape
- Paint or glue
- Wow and flutter meter

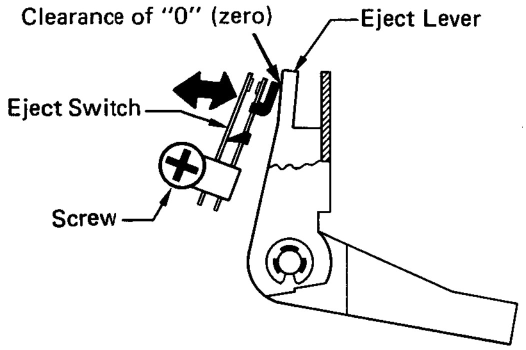
GENERAL REMARKS

- Before adjusting the mechanism of the unit, wipe the tape contacting surfaces clean with a soft cloth soaked in alcohol.

EJECT SWITCH ADJUSTMENT

The Eject Switch is turned on by pushing the Eject button, so that the unit is released from any modes and set in the stop mode. After that, the cassette holder opens slowly.

1. Check that the clearance between the Switch and Eject Lever becomes "0" (zero) when the cassette holder is closed and the Eject button is slightly pushed.
2. If necessary, loosen the screw fastening the Switch and move the Switch to the specified position as illustrated.



3. After the adjustment, tighten the fastening screw and secure it with paint or glue.

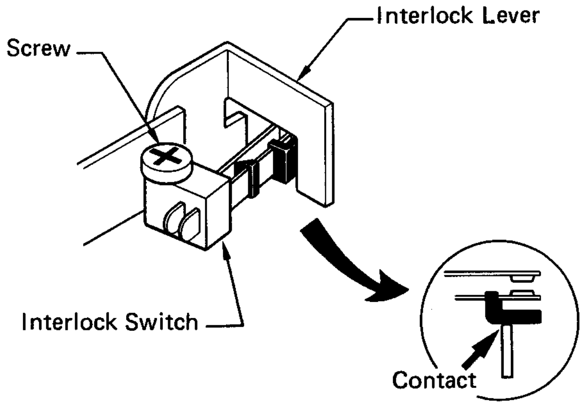
NOTE:
The clearance of the switch contacts should be approximately 0.5mm.

INTERLOCK SWITCH ADJUSTMENT

It can be checked whether the flaps on the rear of the cassette are removed or not by pressing this switch lever. If the switch does not function, no recording can be made by pressing the Record button. This switch performs the following functions to prevent a recording error.

- When the cassette has the flaps or the cassette holder is opened, this switch is turned on.
- When the cassette has no flaps or the cassette holder is closed without a cassette inserted into the cassette holder, this switch is turned off.
  Perform the switch adjustment as follows:

1. Close the cassette holder without a cassette inserted into the cassette holder. Loosen the screw fastening the switch and bring the switch in contact with the Interlock Lever as illustrated. Then, tighten the fastening screw.

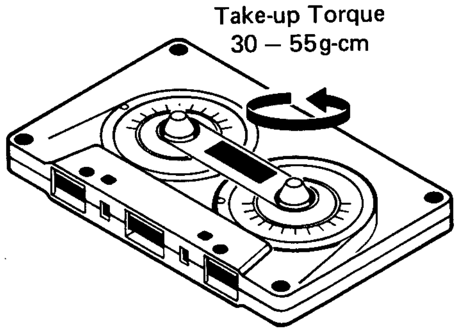


2. Insert a cassette into the cassette holder. Then, alternately open and close the cassette holder and check to see that the switch functions correctly.
3. After the adjustment, secure the fastening screw with paint or glue.

NOTE:
Before this adjustment, remove the Mechanism Chassis from the unit. Also remove the Plunger Bracket from the Mechanism Chassis. The clearance of the switch contacts should be approximately 0.5mm.

TAKE-UP TORQUE ADJUSTMENT

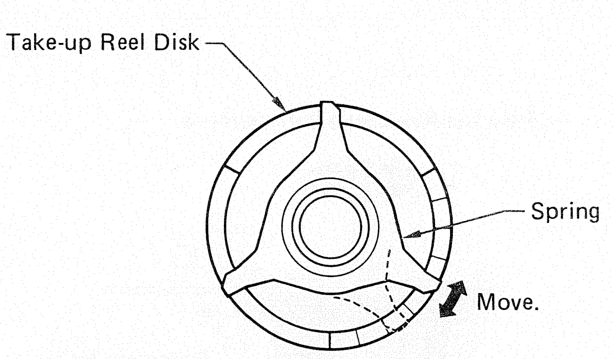
1. Insert the cassette-type torque meter (100g-cm Max.) into the cassette holder and set the unit in the playback mode. The torque meter should read 30 – 55g-cm.



Cassette-type Torque Meter

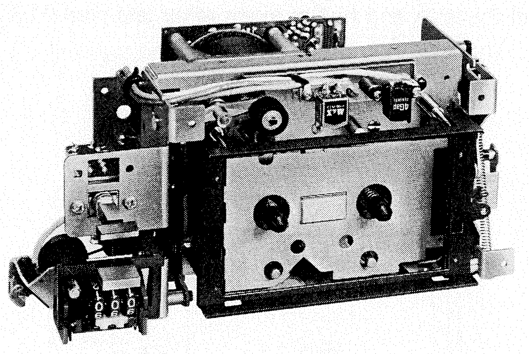
2. If necessary, adjust the take-up torque by moving the spring of the Take-up Reel Disk as illustrated.

MECHANICAL ADJUSTMENTS (Continued)


Take-up Reel Disk
Spring
Move.

SOLENOID ADJUSTMENT

Two Solenoids are used in the Mechanism Chassis. Remove the Mechanism Chassis from the unit by following its removal instruction and turn over the Chassis as illustrated. Then, adjust the solenoid positions.

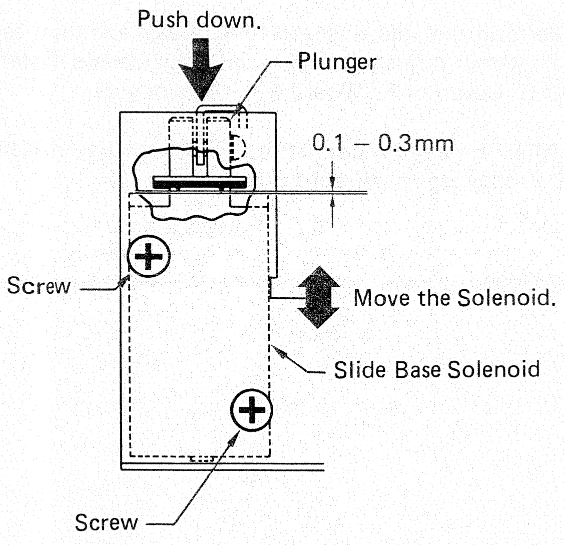


SLIDE BASE SOLENOID ADJUSTMENT

1. Loosen two screws fastening the Slide Base Solenoid and slowly press down the Plunger of the Slide Base Solenoid.

2. When the Slide Base is fully pressed down, the clearance between the Solenoid and Plunger should be 0.1 – 0.3mm.

3. If necessary, adjust the clearance by moving the solenoid position as illustrated.

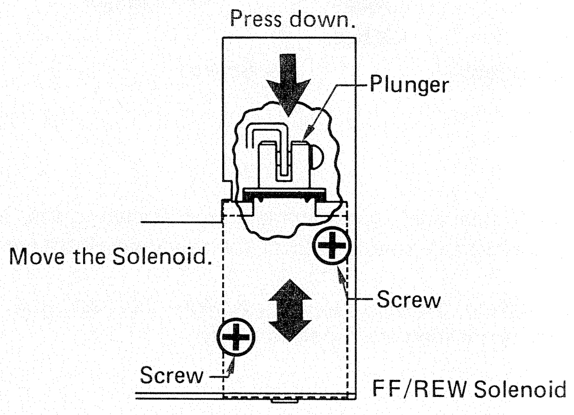

Push down.
Plunger
0.1 – 0.3mm
Screw
Move the Solenoid.
Slide Base Solenoid
Screw

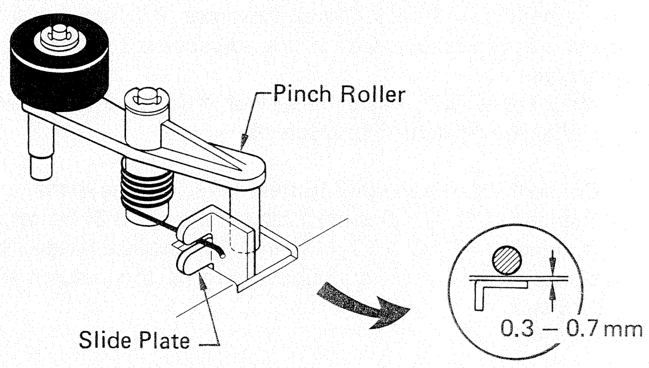
4. After the adjustment, tighten the screws fastening the Solenoid and secure them with paint or glue.

F.FWD/REW SOLENOID ADJUSTMENT

1. While keeping the Plunger of the Slide Base Solenoid pressed down, fully press down the Plunger of the F.FWD/REW Solenoid.

2. Check that the clearance between the Pinch Roller and Slide Plate is 0.3 – 0.7 mm as illustrated.


Press down.
Plunger
Move the Solenoid.
Screw
Screw
FF/REW Solenoid


Pinch Roller
Slide Plate
0.3 – 0.7 mm

3. If necessary, loosen two screws fastening the F.FWD/REW Solenoid and move the Solenoid until the specified clearance is obtained.

NOTE:
When two Solenoids are not positioned correctly, the Solenoid may not pull the Plunger or the tape will be damaged.

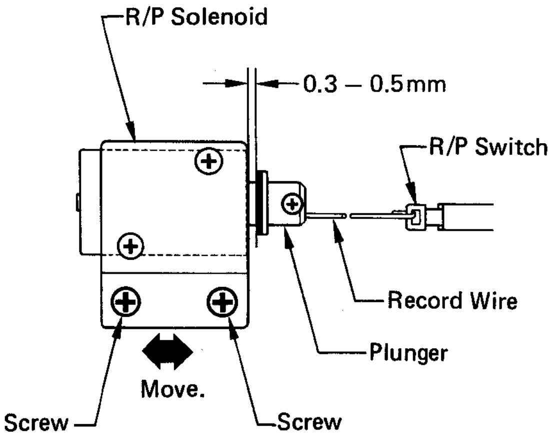
R/P SOLENOID ADJUSTMENT

1. Remove the Cover and Sheet Panel from the unit by following their removal instructions. Then, remove the Control P.C.Board.

2. Slowly press the Plunger of the R/P Solenoid, observing the R/P Switch on the Amplifier P.C.Board.

3. When the R/P Switch is completely changed over, check that the clearance between the Solenoid and Plunger is 0.3 – 0.5mm.

MECHANICAL ADJUSTMENTS (Continued)


R/P Solenoid
0.3 – 0.5mm
R/P Switch
Record Wire
Plunger
Move.
Screw
Screw

4. If necessary, loosen the screws fastening the Solenoid and move the Solenoid until the specified clearance is obtained.

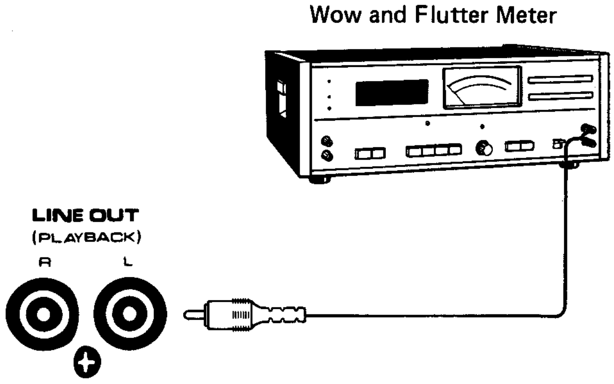
5. After the adjustment, tighten the fastening screws and secure them with paint or glue.

D.D. MOTOR ADJUSTMENT

After the D.D. (Direct Drive) Governor P.C.Board has been removed or replaced, perform this adjustment by the following procedure.

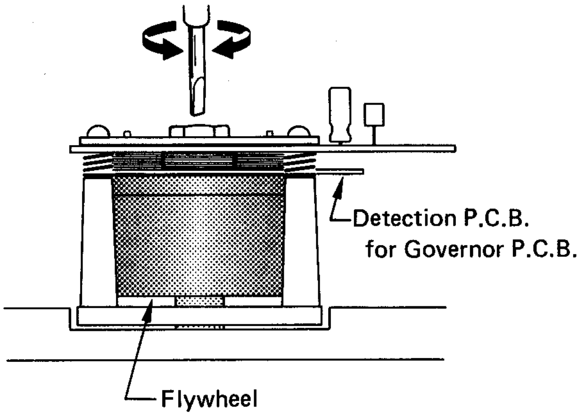
1. Mount the D.D. Motor Governor P.C.Board to the Motor Holder by tightening four screws.

2. Connect the wow and flutter meter to the right or left channel LINE OUT as illustrated and insert a 3kHz test tape (Example: TEAC MTT-111) into the cassette holder. While playing back the test tape, perform the adjustment as follows.

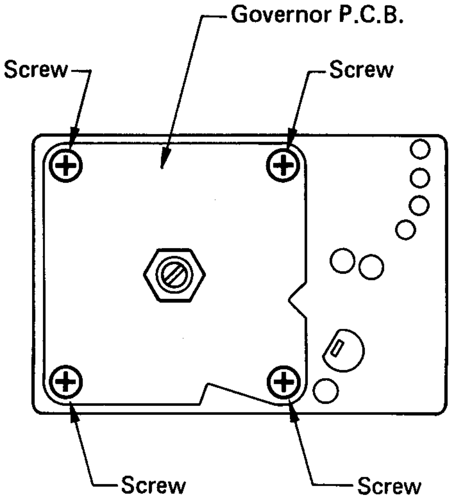

Wow and Flutter Meter
LINE OUT
(PLAYBACK)
R
L

3. Slowly turn the Flywheel Adjusting Screw counter-clockwise until the Flywheel comes in contact with the Detection P.C.Board on the D.D. Governor P.C.Board, and also turn the Adjusting Screw clockwise by 270° from the position as illustrated.

Turn the flywheel adjusting screw.


Detection P.C.B.
for Governor P.C.B.
Flywheel

4. Then, turn four screws fastening the Governor P.C.Board until the wow and flutter meter reads less than 0.04%.


Governor P.C.B.
Screw
Screw
Screw
Screw

5. Perform the adjustment in Item 3 again and then, secure the Flywheel Adjusting Screw and four screws fastening the D.D. Governor P.C.Board with paint or glue.

6. After the adjustment, perform the Tape Speed Adjustment by following its adjusting procedure.

ELECTRICAL ADJUSTMENTS

EQUIPMENT REQUIRED

- VTVM (2 sets)
- Frequency Counter
- Attenuator
- Dummy Load
  - * 47k-ohm Dummy Load: used when the output is obtained from LINE OUT
- Audio Signal Generator
- Dualtrace Synchroscope
- Test Tapes
  - * 3kHz Test Tape (Example: TEAC MTT-111) for Tape Speed Adjustment
  - * 10kHz Test Tape (Example: TEAC MTT-114) for Head Azimuth Adjustment
  - * Test Tape (Example: TEAC MTT-150 for DOLBY Calibration Level) for Playback Sensitivity Adjustment
- Tapes for recording and playback
  - * Normal Tape (Example: TDK AC-221)
  - * Chrome Tape (Example: TDK AC-512)
  - * Metal Tape (Example: TDK AC-711)
- Alignment Tool

Before the Electrical Adjustment, set the measuring instruments as follows:

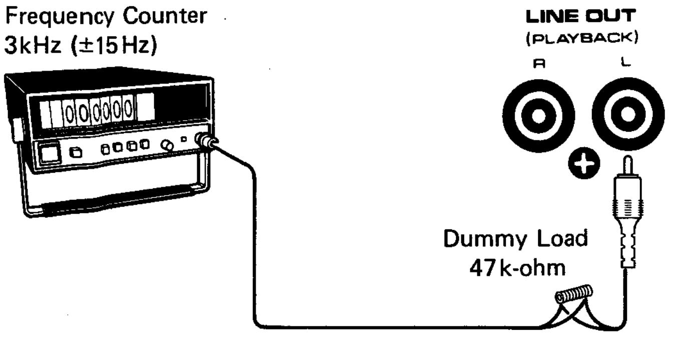
- Input Select Switch .... LINE
- DOLBY NR Switch .... OFF
- Tape Select Switch .... NORMAL
- Timer Record Switch .... OFF
- Input Level Control .... Maximum
- Audio Signal Generator Output 1kHz 0dB, 1V

NOTE:

1. Perform the adjustment in the order described in this manual.
2. Use C125 and C225 (plus sides) in the Amplifier P.C.Board as test points (TP101 and TP201) for the adjustment.

TAPE SPEED ADJUSTMENT

1. Remove the Cover from the unit and connect the frequency counter to the left or right channel LINE OUT as illustrated. Then, insert a 3kHz test tape (Example: TEAC MTT-111) into the cassette holder.



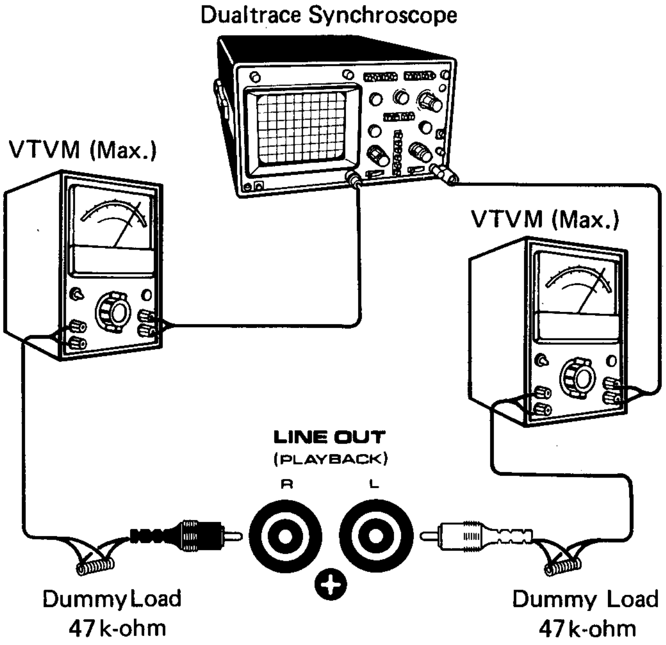
2. While playing back the test tape, adjust the tape speed by turning the potentiometer (P601) in the D.D. Motor Control P.C.Board until the frequency counter reads 3kHz (±15Hz).

HEAD AZIMUTH ADJUSTMENT

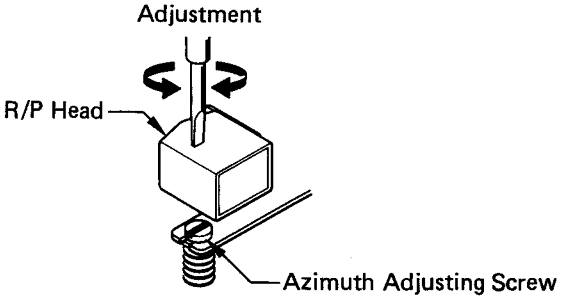
1. Connect the dualtrace synchroscope and the VTVM to the both channel LINE OUT as illustrated and then, set the dualtrace synchroscope as follows:
   - * MODE .... CHOP (chopped)
   - * SOURCE .... INT. (internal), CH1 or CH2
   - * SWEEP MODE .... Auto (automatic)

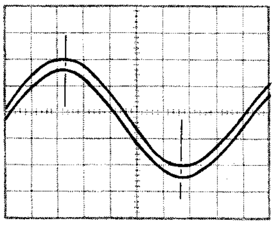
   NOTE:

   Adjust the field on the synchroscope with the VOL. ADJ. and TIME ADJ.



2. Insert a 10kHz test tape (Example: TEAC MTT-114) into the cassette holder and set the unit in the playback mode.
3. While playing back the test tape, slowly turn the azimuth adjusting screw until the amplitudes of the right and left channel signal wave forms are at maximum and both wave forms are superimposed. Set to optimum at maximum reading of the VTVMs.





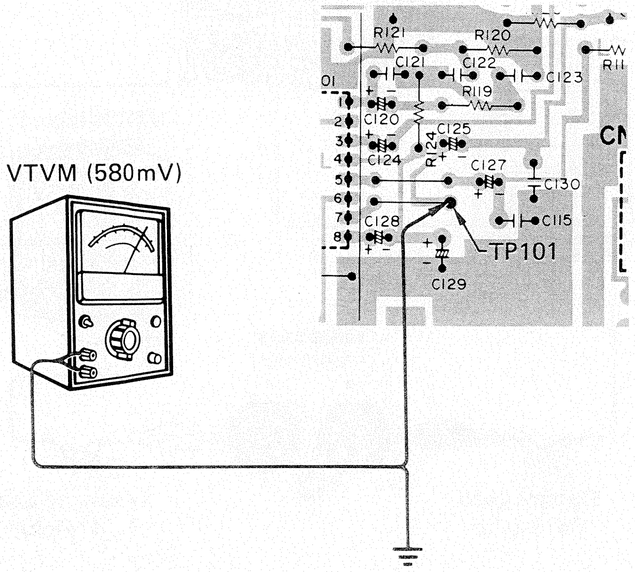
ELECTRICAL ADJUSTMENTS (Continued)

4. After the adjustment, secure the azimuth adjusting screw with paint or glue.

PLAYBACK AND METER SENSITIVITY ADJUSTMENT

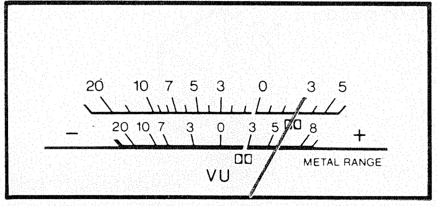
RIGHT CHANNEL

1. Connect the VTVM to the test point TP101 (plus side of C125) as illustrated and insert the test tape for Dolby Level Calibration (Example: TEAC MTT-150) into the cassette holder.


VTVM (580mV)
R121
R120
C121
C122
C123
R119
C120
C125
R124
C124
C127
C130
C128
C115
TP101
C129

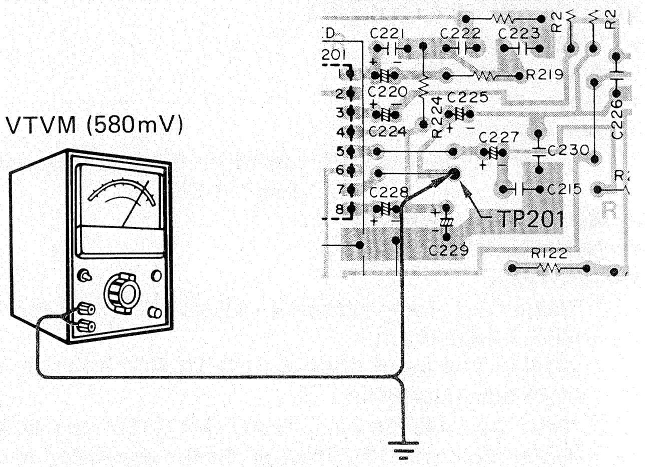
2. While playing back the test tape, adjust the potentiometer (P104) until the signal output of the test tape becomes 580mV on the VTVM.

3. While keeping the unit in the above condition, adjust the potentiometer (P105) until the pointer of the left channel Meter swings to +3VU (DOLBY mark position) as illustrated.


20 10 7 5 3 0 3 5
− 20 10 7 3 0 3 5 8 +
VU
METAL RANGE

LEFT CHANNEL

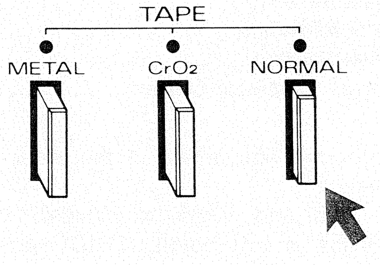
Connect the VTVM to the test point TP201 (plus side of C225) and adjust the potentiometers (P204 and P205) for the right channel by following the same procedure as LEFT CHANNEL.


VTVM (580mV)
C221
C222
C223
R219
C220
C225
R224
C224
C227
C230
C215
C228
TP201
C229
R122

RECORDING AND PLAYBACK FREQUENCY RESPONSE ADJUSTMENT

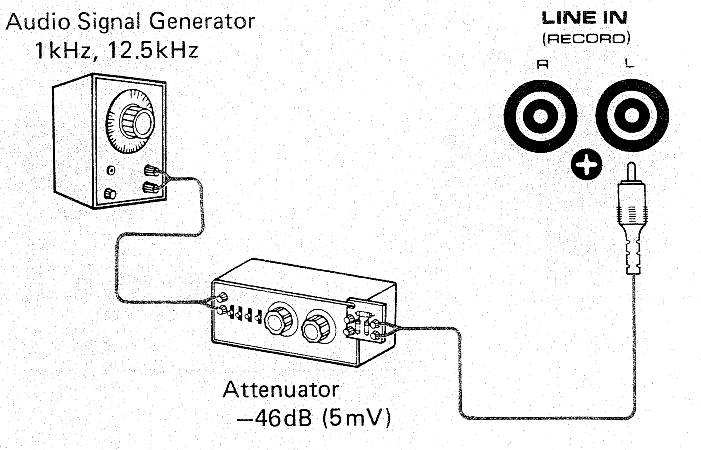
- **For Normal Tape**

  Set the Tape Select Switch to NORMAL and insert a normal tape (Example: TDK AC-221) into the cassette holder. Then, perform the adjustment by the following procedures.

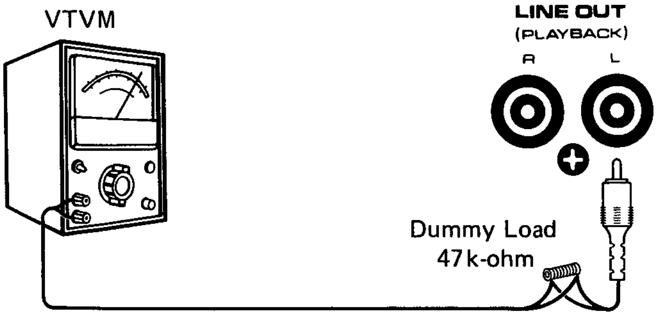

TAPE
METAL
CrO2
NORMAL

LEFT CHANNEL

1. Connect the audio signal generator and the attenuator to the left channel LINE IN, and the VTVM to the left channel LINE OUT as illustrated.


Audio Signal Generator
1kHz, 12.5kHz
LINE IN
(RECORD)
R
L
Attenuator
−46dB (5mV)

ELECTRICAL ADJUSTMENTS (Continued)



OUTPUT
12.5kHz = 1kHz, ±1dB

2. Alternately record the 1kHz and 12.5kHz signals at –46dB (5mV) from the audio signal generator on the tape several times.

3. While playing back the recorded signals, check that the 12.5kHz signal output is identical to the 1kHz signal output or the deviation is ±1dB on the VTVM.

4. If not, adjust the potentiometer (P101) and re-check the output of each signal by playing back the signals after the recording operation for the signals.

5. Repeat the above adjustment until the specified output is obtained.

RIGHT CHANNEL

Connect the audio signal generator and the attenuator to the right channel LINE IN, and the VTVM to the right channel LINE OUT. Then, adjust the potentiometer (P201) for the right channel by following the same procedure as LEFT CHANNEL.

• For Chromium Dioxide Tape

Set the Tape Select Switch to CrO2 and insert a chromium dioxide tape (Example: TDK AC-512) into the cassette holder. Then, adjust the potentiometers by following the conditions described below and the same procedure as for Normal Tape.

- * Input Signals . . . . 1kHz and 14kHz
- * Input Level . . . . –46dB (5mV)
- * Potentiometers for adjustment
  - Left channel P102
  - Right channel P202

• For Metal Tape

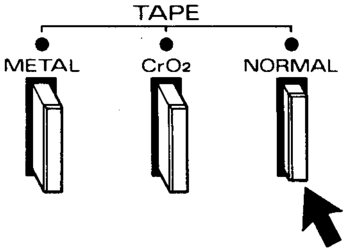
Set the Tape Select Switch to METAL and insert a metal tape (Example: TDK AC-711) into the cassette holder. Then, adjust the potentiometers by following the conditions described below and the same procedure as for Normal Tape.

- * Input Signals . . . . 1kHz and 14kHz
- * Input Level . . . . –46dB (5mV)
- * Potentiometers for adjustment
  - Left channel P103
  - Right channel P203

RECORDING AND PLAYBACK SENSITIVITY ADJUSTMENT

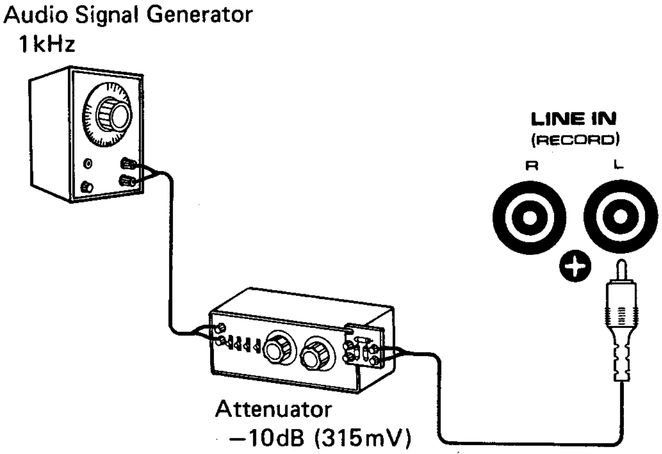
• For Normal Tape

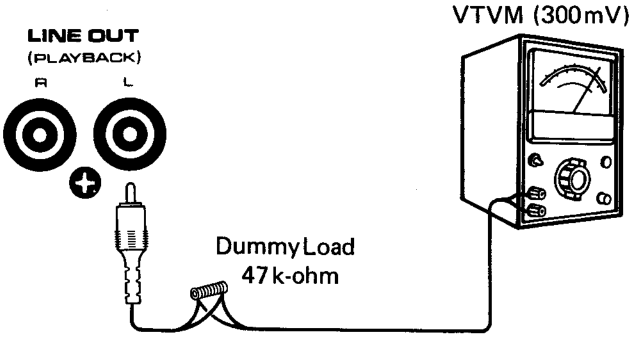
Set the Tape Select Switch to NORMAL and insert a normal tape (Example: TDK AC-221) into the cassette holder. Then, perform the adjustment by the following procedure.



LEFT CHANNEL

1. Connect the audio signal generator and the attenuator to the left channel LINE IN, and the VTVM to the left channel LINE OUT as illustrated.





ELECTRICAL ADJUSTMENTS (Continued)

2. Set the unit in the recording standby mode by pressing the Pause button first and then, the Record and Play buttons.

3. Feed the 1kHz signal from the audio signal generator at −10dB (315mV) into the unit and adjust the left channel Input Level Control (VR101) until the VTVM reads 300mV. After the adjustment, release the pause mode by pressing the Pause button and record the signal on the tape.

4. While playing back the recorded signal, check that the signal output is 300mV (±1dB) on the VTVM.

5. If necessary, adjust the potentiometer (P106) and repeat the recording and playback operations.

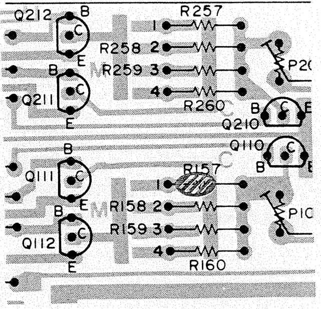
6. Repeat the above adjustment until the specified output is obtained.

RIGHT CHANNEL
Connect the audio signal generator and the attenuator to the right channel LINE IN, and the VTVM to the right channel LINE OUT. Then, adjust the right channel Input Level Control (VR201) and the potentiometer (P206) for the right channel by folllowing the same procedure as LEFT CHANNEL.

● For Chromium Dioxide Tape

Set the Tape Select Switch to CrO2 and insert a chromium dioxide tape (Example: TDK AC-512) into the cassette holder. Then, feed the 1kHz signal from the audio signal generator at −10dB (315mV) into the unit and perform the adjustment by following the same procedure as for Normal Tape.

LEFT CHANNEL
Select the pattern on the collector side of the Transistor Q111 and one of the patterns (1 − 4) of the Resistors R157 − R160 and connect them, so that the output of the 1kHz signal becomes 300mV (±1.5dB) on the VTVM.

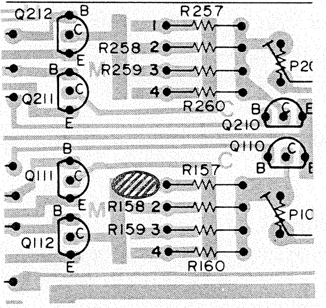


RIGHT CHANNEL
Select the pattern on the collector side of the Transistor Q211 and one of the patterns (1 − 4) of the Resistors R257 − R260 and connect them, so that the output of the 1kHz signal becomes 300mV (±1.5dB) on the VTVM.

● For Metal Tape

Set the Tape Select Switch to METAL and insert a metal tape (Example: TDK AC-711) into the cassette holder. Then, feed the 1kHz signal from the audio signal generator at −10dB (315mV) into the unit and perform the adjustment by following the same procedure as for Normal Tape.

LEFT CHANNEL
Select the pattern on the collector side of the Transistor Q112 and one of the patterns (1 − 4) of the Resistors R157 − R160 and then, connect them, so that the output of the 1kHz signal becomes 300mV (±1.5dB) on the VTVM.



RIGHT CHANNEL
Select the pattern on the collector side of the Transistor Q212 and one of the patterns (1 − 4) of the Resistors R257 − R260 and then, connect them, so that the output of the 1kHz signal becomes 300mV (±1.5dB) on the VTVM.

DOLBY CIRCUIT ALTERATION

As NE646B is used in place of LM1011 for DOLBY IC, the DOLBY Circuit is altered as follows:

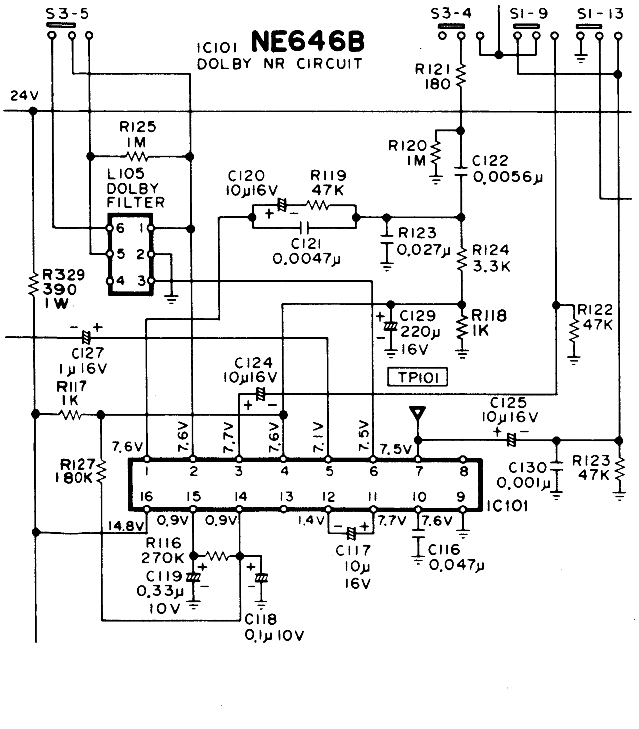
ALTERED PARTS	ALTERATION	ALTERED PARTS NUMBER
IC101, IC201	ML1011 ➞ NE646B	4 2069 70380
R117, R217	270k ohm ➞ 1k ohm 1/4W	RD1 0 2251 JM000
R118, R218	560k ohm ➞ 1k ohm 1/4W	RD1 0 2251 JM000
R127, R227	Added ➞ 180k ohm 1/4W	RD1 8 4251 JM000
R329	390 ohm ➞ 220 ohm 1W	RH2 2 1102 KZ000
C126, C226	0.001 µF ➞ not used	
C128, C228	10 µF 16V ➞ not used	

APPLICATION:

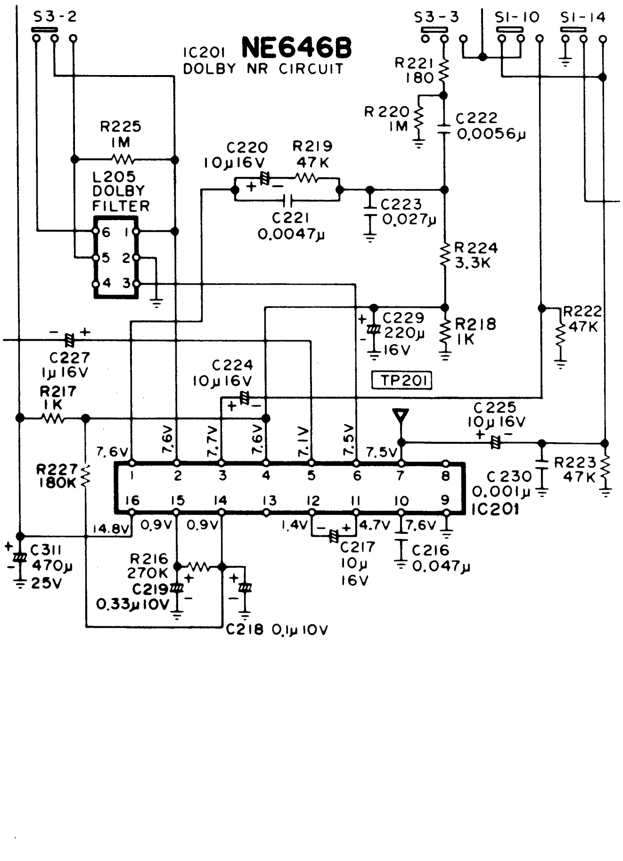
The pattern on P.C.Board is altered according to the serial numbers (after 15001) imprinted on the unit.

ALTERED SCHEMATIC DIAGRAMS

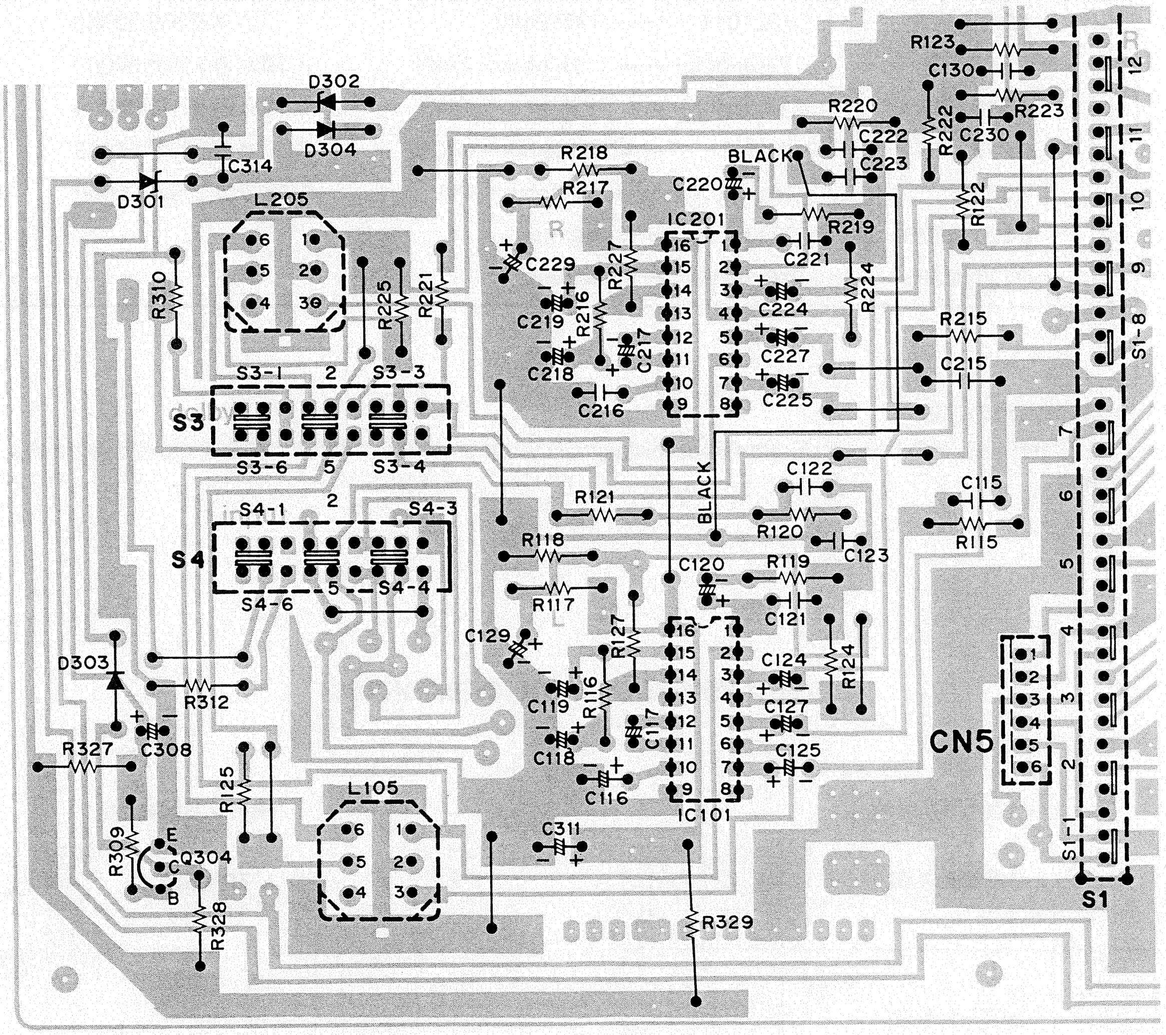
Left Channel


S3-5
S3-4
SI-9
SI-13
IC101 NE646B
DOLBY NR CIRCUIT
R121 180
24V
R125 1M
R120 1M
C122 0.0056µ
L105 DOLBY FILTER
C120 10µ16V
R119 47K
C121 0.0047µ
R123 0.027µ
R124 3.3K
R329 390 1W
C129 220µ 16V
R118 1K
R122 47K
C127 1µ16V
R117 1K
C124 10µ16V
TP101
C125 10µ16V
7.6V
7.6V
7.7V
7.6V
7.1V
7.5V
7.5V
R127 180K
1 2 3 4 5 6 7 8
16 15 14 13 12 11 10 9
C130 0.001µ
R123 47K
IC101
14.8V
0.9V
0.9V
1.4V
7.7V
7.6V
R116 270K
C119 0.33µ 10V
C117 10µ 16V
C116 0.047µ
C118 0.1µ 10V

Right Channel


S3-2
S3-3
SI-10
SI-14
IC201 NE646B
DOLBY NR CIRCUIT
R221 180
R220 1M
C222 0.0056µ
R225 1M
C220 10µ16V
R219 47K
L205 DOLBY FILTER
C223 0.027µ
C221 0.0047µ
R224 3.3K
C229 220µ 16V
R218 1K
R222 47K
C227 1µ16V
R217 1K
C224 10µ16V
TP201
C225 10µ16V
7.6V
7.6V
7.7V
7.6V
7.1V
7.5V
7.5V
R227 180K
1 2 3 4 5 6 7 8
16 15 14 13 12 11 10 9
C230 0.001µ
R223 47K
IC201
14.8V
0.9V
0.9V
1.4V
4.7V
7.6V
C311 470µ 25V
R216 270K
C219 0.33µ10V
C217 10µ 16V
C216 0.047µ
C218 0.1µ 10V

ALTERED PATTERNS ON AMPLIFIER P.C.BOARD


D302
D304
D301
C314
L205
R310
R225
R221
R218
R217
C229
R227
R216
C219
C218
C217
C216
C220
BLACK
IC201
R220
C222
C223
R222
R123
C130
R223
C230
R122
R219
C221
R224
C224
C227
C225
R215
C215
S3-1
S3-3
S3-6
S3-4
S3
S4-1
S4-3
S4-6
S4-4
S4
R121
R118
R117
BLACK
C122
R120
C123
C115
R115
C120
R119
C121
C129
R127
R116
C119
C118
C117
C116
C124
C127
C125
R124
IC101
CN5
D303
R312
C308
R327
R125
L105
R309
Q304
E
C
B
R328
C311
R329
S1
S1-1
S1-8

PARTS LIST

PRODUCT SAFETY NOTICE

PRODUCT SAFETY SHOULD BE CONSIDERED WHEN A COMPONENT REPLACEMENT IS MADE IN ANY AREA OF AN UNIT. COMPONENTS INDICATED BY A MARK ⚠ IN THIS PARTS LIST AND THE SCHEMATIC DIAGRAM SHOW COMPONENTS WHOSE VALUE HAS SPECIAL SIGNIFICANCE TO PRODUCT SAFETY. IT IS PARTICULARLY RECOMMENDED THAT ONLY PARTS SPECIFIED ON THE FOLLOWING PARTS LIST BE USED FOR COMPONENT REPLACEMENT POINTED OUT BY THE MARK.

Ref. No.	Part No.	Description	Q'ty
PACKAGE			
	141 6 1419 48501	Individual Carton	1
	141 6 1449 65000	Styrofoam Case	1
	141 6 1449 65100	Styrofoam Case	1
	141 6 2519 11890	Poly Cover	1
	141 6 3119 19800	Pad	2
	141 6 4559 03200	Serial No. Sheet	3
	141 6 4729 32600	Remote Label	1
ACCESSORIES			
	4 2369 70572	Patch Cord	2
	141 6 4519 19400	Warranty Card	1
	141 6 4729 07700	Caution Label	1
	142 6 4119 06300	Instruction Manual	1
CABINET			
	141 0 1119 70002	Front Panel Assy (Silver)	1
	141 0 1119 73200	Front Panel Assy (Black)	1
	141 0 1219 04701	Button Panel Assy (Silver)	1
	141 0 1219 04702	Button Panel Assy (Black)	1
	141 0 1249 17200	Cassette Lid Assy (Silver)	1
	141 0 1249 17700	Cassette Lid Assy (Black)	1
	141 2 1119 64100	Cover	1
	141 2 1219 15202	Panel (Silver)	1
	141 2 1219 15204	Panel (Black)	1
	141 2 1319 19400	Cassette Lid Clear	1
	141 2 1419 09284	Rating Plate	1
	141 2 2449 33400	Panel Sheet	1
	141 2 4219 22400	Dress Screw	2
	141 2 4359 25200	Insulator	1
	141 2 4469 34100	Cushion	1
	141 2 4469 34200	Cushion	2
	102 3 1703 01218	Screw, Bind Hd. Tapping-1 +M3.0x12	5
	143 3 1302 60611	Screw, Pan Hd. Tapping-B +M2.6x6	7
	143 3 1303 00811	Screw, Pan Hd. Tapping-B +M3.0x8	2
	143 3 1903 00811	Screw, Brazier Hd. Tapping-B +M3.0x8	5
	141 0 1619 28700	Eject Button Assy	1
	141 0 1619 29200	Power Knob Assy	1
	141 2 1619 74800	Switch Knob	1
	141 2 1619 74900	Select Knob	5
	141 2 1639 37100	Volume Knob (Silver)	2
	141 2 1639 37101	Volume Knob (Black)	2
FUNCTION SWITCH KEY BOARD ASSY			
	4 2319 74481	Function Switch Key Board Assy	1
	141 2 3769 12000	Spacer	1
	141 2 3529 30900	Rubber Sheet	1
CN1	4 2359 75230	Connector 13P Assy	1
D42	4 2029 71520	LED, SLC-22UR (Pause)	1
D43	4 2029 71520	LED, SLC-22UR (Record)	1
D44	4 2029 71520	LED, SLC-22UR (Record Mute)	1
D45	4 2029 71521	LED, SLC-22GG (Play)	1
	4 2269 34800	Switch Board P.C.B.	1
PRE-AMPLIFIER P.C.B. ASSY			
	4 1329 75721	Pre-Amplifier P.C.B. Assy	1
J7	4 2359 71550	DIN Socket 5P (Record/Play)	1
	141 2 4729 05800	Staple 15	3
T301	4 2589 71550	OSC Transformer	1

Ref. No.	Part No.	Description	Q'ty
PRE-AMPLIFIER P.C.B. ASSY			
C101	CC1 0 1500 KD00C	Ceramic 100 pF 50V ±10%	1
C102	CC1 0 2500 KE00C	Ceramic 0.001 µF 50V ±10%	1
C103	CC5 6 1500 KD00C	Ceramic 560 pF 50V ±10%	1
C104	CD4 7 6160 0000V	Electrolytic 47 µF 16V	1
C105	CD1 0 6500 0000V	Electrolytic 10 µF 50V	1
C106	CC4 7 1500 KD00C	Ceramic 470 pF 50V ±10%	1
C107	CC5 6 0500 KD00C	Ceramic 56 pF 50V ±10%	1
C108	CD4 7 6100 0000V	Electrolytic 47 µF 10V	1
C109	CD1 0 6500 0000V	Electrolytic 10 µF 50V	1
C110	CD1 0 6500 0000V	Electrolytic 10 µF 50V	1
C111	CM1 0 3500 K00SV	Mylar 0.01 µF 50V ±10%	1
C112	CM2 2 3500 K00SV	Mylar 0.022 µF 50V ±10%	1
C113	CD1 0 5500 0000V	Electrolytic 1 µF 50V	1
C115	CC2 2 1500 KD00C	Ceramic 220 pF 50V ±10%	1
C116	CM4 7 3500 K00SV	Mylar 0.0047 µF 50V ±10%	1
C117	CD1 0 6160 0000V	Electrolytic 10 µF 16V	1
C118	CA1 0 4100 K000V	Aluminum 0.1 µF 10V ±10%	1
C119	CA3 3 4100 K000V	Aluminum 0.33 µF 10V ±10%	1
C120	CD1 0 6160 0000V	Electrolytic 10 µF 16V	1
C121	CM4 7 2500 K00SV	Mylar 0.0047 µF 50V ±10%	1
C122	CM5 6 2500 K00SV	Mylar 0.0056 µF 50V ±10%	1
C123	CM2 7 3500 K00SV	Mylar 0.027 µF 50V ±10%	1
C124	CD1 0 6160 0000V	Electrolytic 10 µF 16V	1
C125	CD1 0 6160 0000V	Electrolytic 10 µF 16V	1
C126	CC1 0 2500 KE00C	Ceramic 0.001 µF 50V ±10%	1
C127	CD1 0 5160 0000V	Electrolytic 1 µF 16V	1
C128	CD1 0 6160 0000V	Electrolytic 10 µF 16V	1
C129	CD2 2 7160 0001V	Electrolytic 220 µF 16V	1
C130	CC1 0 2500 KE00C	Ceramic 0.001 µF 50V ±10%	1
C131	CD4 7 4500 0000V	Electrolytic 0.47 µF 50V	1
C132	CD1 0 6160 0000V	Electrolytic 10 µF 16V	1
C133	CC1 5.0500 KD00C	Ceramic 15 pF 50V ±10%	1
C134	CD1 0 6160 0000V	Electrolytic 10 µF 16V	1
C135	CD4 7 4500 0000V	Electrolytic 0.47 µF 50V	1
C136	CD1 0 7100 0001V	Electrolytic 100 µF 10V	1
C137	CC6 8 1500 KD00C	Ceramic 680 pF 50V ±10%	1
C138	CC6 8 0500 KD00C	Ceramic 68 pF 50V ±10%	1
C139	CC1 5 1500 KD00C	Ceramic 150 pF 50V ±10%	1
C140	CM3 9 3500 K00SV	Mylar 0.039 µF 50V ±10%	1
C141	CM2 7 3500 K00SV	Mylar 0.027 µF 50V ±10%	1
C142	CM4 7 3500 K00SV	Mylar 0.047 µF 50V ±10%	1
C143	CM2 7 3500 K00SV	Mylar 0.027 µF 50V ±10%	1
C144	CM4 7 3500 K00SV	Mylar 0.047 µF 50V ±10%	1
C145	CM1 8 3500 K00SV	Mylar 0.018 µF 50V ±10%	1
C170	CD1 0 6500 0000V	Electrolytic 10 µF 50V	1
C171	CD1 0 6500 0000V	Electrolytic 10 µF 50V	1
C180	CD1 0 6160 0000V	Electrolytic 10 µF 16V	1
C181	CD1 0 5160 0000V	Electrolytic 1 µF 16V	1
C201	CC1 0 1500 KD00C	Ceramic 100 pF 50V ±10%	1
C202	CC1 0 2500 KE00C	Ceramic 0.001 µF 50V ±10%	1
C203	CC5 6 1500 KD00C	Ceramic 560 pF 50V ±10%	1
C204	CD4 7 6160 0000V	Electrolytic 47 µF 16V	1
C205	CD1 0 6500 0000V	Electrolytic 10 µF 50V	1
C206	CC4 7 1500 KD00C	Ceramic 470 pF 50V ±10%	1
C207	CC5 6 0500 KD00C	Ceramic 56 pF 50V ±10%	1
C208	CD4 7 6100 0000V	Electrolytic 47 µF 10V	1
C209	CD1 0 6500 0000V	Electrolytic 10 µF 50V	1
C210	CD1 0 6500 0000V	Electrolytic 10 µF 50V	1
C211	CM1 0 3500 K00SV	Mylar 0.01 µF 50V ±10%	1

PARTS LIST (Continued)

Ref. No.	Part No.	Description	Q'ty
PRE-AMPLIFIER P.C.B. ASSY			
C212	CM2 2 3500 K00SV	Mylar 0.022 µF 50V ±10%	1
C213	CD1 0 5500 0000V	Electrolytic 1 µF 50V	1
C215	CC2 2 1500 KD00C	Ceramic 220 pF 50V ±10%	1
C216	CM4 7 3500 K00SV	Mylar 0.047 µF 50V ±10%	1
C217	CD1 0 6160 0000V	Electrolytic 10 µF 16V	1
C218	CA1 0 4100 K000V	Aluminum 0.1 µF 10V ±10%	1
C219	CA3 3 4100 K000V	Aluminum 0.33 µF 10V ±10%	1
C220	CD1 0 6160 0000V	Electrolytic 10 µF 16V	1
C221	CM4 7 2500 K00SV	Mylar 0.0047 µF 50V ±10%	1
C222	CM5 6 2500 K00SV	Mylar 0.0056 µF 50V ±10%	1
C223	CM2 7 3500 K00SV	Mylar 0.027 µF 50V ±10%	1
C224	CD1 0 6160 0000V	Electrolytic 10 µF 16V	1
C225	CD1 0 6160 0000V	Electrolytic 10 µF 16V	1
C226	CC1 0 2500 KE00C	Ceramic 0.001 µF 50V ±10%	1
C227	CD1 0 5160 0000V	Electrolytic 1 µF 16V	1
C228	CD1 0 6160 0000V	Electrolytic 10 µF 16V	1
C229	CD2 2 7160 0001V	Electrolytic 220 µF 16V	1
C230	CC1 0 2500 KE00C	Ceramic 0.001 µF 50V ±10%	1
C231	CD4 7 4500 0000V	Electrolytic 0.47 µF 50V	1
C232	CD1 0 6160 0000V	Electrolytic 10 µF 16V	1
C233	CC1 5 0500 KD00C	Ceramic 15 pF 50V ±10%	1
C234	CD1 0 6160 0000V	Electrolytic 10 µF 16V	1
C235	CD4 7 4500 0000V	Electrolytic 0.47 µF 50V	1
C236	CD1 0 7100 0001V	Electrolytic 100 µF 10V	1
C237	CC6 8 1500 KD00C	Ceramic 680 pF 50V ±10%	1
C238	CC6 8 0500 KD00C	Ceramic 68 pF 50V ±10%	1
C239	CC1 5 1500 KD00C	Ceramic 150 pF 50V ±10%	1
C240	CM3 9 3500 K00SV	Mylar 0.039 µF 50V ±10%	1
C241	CM2 7 3500 K00SV	Mylar 0.027 µF 50V ±10%	1
C242	CM4 7 3500 K00SV	Mylar 0.047 µF 50V ±10%	1
C243	CM2 7 3500 K00SV	Mylar 0.027 µF 50V ±10%	1
C244	CM4 7 3500 K00SV	Mylar 0.047 µF 50V ±10%	1
C245	CM1 8 3500 K00SV	Mylar 0.018 µF 50V ±10%	1
C270	CD1 0 6500 0000V	Electrolytic 10 µF 50V	1
C271	CD1 0 6500 0000V	Electrolytic 10 µF 50V	1
C280	CD1 0 6160 0000V	Electrolytic 10 µF 16V	1
C281	CD1 0 5160 0000V	Electrolytic 1 µF 16V	1
C301	CS2 7 2121 J010V	Polystyrol 2700 pF 125V ±5%	1
C302	CM4 7 2500 K00SV	Mylar 0.0047 µF 50V ±10%	1
C303	CM4 7 2500 K00SV	Mylar 0.0047 µF 50V ±10%	1
C304	CM1 0 3500 K00SV	Mylar 0.01 µF 50V ±10%	1
C305	CD1 0 7100 0001V	Electrolytic 100 µF 10V	1
C306	CD1 0 5500 0000V	Electrolytic 1 µF 50V	1
C307	CD4 7 7250 0001V	Electrolytic 470 µF 25V	1
C308	CD1 0 5500 0000V	Electrolytic 1 µF 50V	1
C309	CD4 7 5100 0000V	Electrolytic 4.7 µF 10V	1
C310	CC1 0 2500 KE00C	Ceramic 0.001 µF 50V ±10%	1
C311	CD4 7 7250 0001V	Electrolytic 470 µF 25V	1
C312	CD4 7 7250 0001V	Electrolytic 470 µF 25V	1
C314	CM1 0 3500 K00SV	Mylar 0.01 µF 50V ±10%	1
CN5	4 2369 71452	Connector 6P	1
D101	202 5 3880 44810	Diode, DS448	1
D102	202 5 3880 44810	Diode, DS448	1
D103	202 5 3880 44810	Diode, DS448	1
D104	202 5 3880 44810	Diode, DS448	1
D105	202 5 3880 44810	Diode, DS448	1
D106	202 5 3880 44810	Diode, DS448	1
D107	202 5 3880 44810	Diode, DS448	1
D108	202 5 3880 44810	Diode, DS448	1
D109	202 5 9110 18820	Diode, 1S188	1
D110	202 5 9110 18820	Diode, 1S188	1
D201	202 5 3880 44810	Diode, DS448	1
D202	202 5 3880 44810	Diode, DS448	1
D203	202 5 3880 44810	Diode, DS448	1
D204	202 5 3880 44810	Diode, DS448	1
D205	202 5 3880 44810	Diode, DS448	1
D206	202 5 3880 44810	Diode, DS448	1
D207	202 5 3880 44810	Diode, DS448	1
D208	202 5 3880 44810	Diode, DS448	1
D209	202 5 9110 18820	Diode, 1S188	1

Ref. No.	Part No.	Description	Q'ty
PRE-AMPLIFIER P.C.B. ASSY			
D210	202 5 9110 18820	Diode, 1S188	1
D301	4 2029 70910	Diode, RD3.3EB	1
D302	4 2039 70910	Diode, RD3.3EB	1
D303	202 5 3880 44810	Diode, DS448	1
D304	202 5 3880 44810	Diode, DS448	1
D305	4 2029 71490	Diode, GZA12L	1
IC101	4 2069 70860	IC, LM1011	1
IC201	4 2069 70860	IC, LM1011	1
J4	4 2359 73602	Jack 2P (Line In)	1
J5	4 2359 73602	Jack 2P (Line Out)	1
L101	4 2729 70290	Coil (33 mH)	1
L102	4 2729 70250	Coil (3.3 mH)	1
L103	4 2729 70250	Coil (3.3 mH)	1
L104	4 2729 70250	Coil (3.3 mH)	1
L105	4 2729 70341	DOLBY Filter	1
L201	4 2729 70290	Coil (33 mH)	1
L202	4 2729 70250	Coil (3.3 mH)	1
L203	4 2729 70250	Coil (3.3 mH)	1
L204	4 2729 70250	Coil (3.3 mH)	1
L205	4 2729 70341	DOLBY Filter	1
P101	4 2229 72971	Potentiometer (B-100k)	1
P102	4 2229 72971	Potentiometer (B-100k)	1
P103	4 2229 72971	Potentiometer (B-100k)	1
P104	4 2229 72968	Potentiometer (B-20k)	1
P105	4 2229 72967	Potentiometer (B-10k)	1
P106	4 2229 72968	Potentiometer (B-20k)	1
P201	4 2229 72971	Potentiometer (B-100k)	1
P202	4 2229 72971	Potentiometer (B-100k)	1
P203	4 2229 72971	Potentiometer (B-100k)	1
P204	4 2229 72968	Potentiometer (B-20k)	1
P205	4 2229 72967	Potentiometer (B-10k)	1
P206	4 2229 72968	Potentiometer (B-20k)	1
Q101	203 5 5100 69362	Transistor, 2SC693	1
Q102	203 5 5100 69362	Transistor, 2SC693	1
Q103	203 5 5100 69362	Transistor, 2SC693	1
Q104	203 5 5100 69362	Transistor, 2SC693	1
Q105	203 5 5100 69362	Transistor, 2SC693	1
Q106	203 5 4921 01265	Transistor, 2SD1012	1
Q107	203 5 4921 01265	Transistor, 2SD1012	1
Q108	4 2039 70431	Transistor, 2SC1815	1
Q109	4 2039 70431	Transistor, 2SC1815	1
Q110	4 2039 70431	Transistor, 2SC1815	1
Q111	4 2039 70431	Transistor, 2SC1815	1
Q112	4 2039 70431	Transistor, 2SC1815	1
Q113	4 2039 70431	Transistor, 2SC1815	1
Q114	4 2039 70431	Transistor, 2SC1815	1
Q115	4 2039 70431	Transistor, 2SC1815	1
Q116	4 2039 70431	Transistor, 2SC1815	1
Q201	203 5 5100 69362	Transistor, 2SC693	1
Q202	203 5 5100 69362	Transistor, 2SC693	1
Q203	203 5 5100 69362	Transistor, 2SC693	1
Q204	203 5 5100 69362	Transistor, 2SC693	1
Q205	203 5 5100 69362	Transistor, 2SC693	1
Q206	203 5 4921 01265	Transistor, 2SD1012	1
Q207	203 5 4921 01265	Transistor, 2SD1012	1
Q208	4 2039 70431	Transistor, 2SC1815	1
Q209	4 2039 70431	Transistor, 2SC1815	1
Q210	4 2039 70431	Transistor, 2SC1815	1
Q211	4 2039 70431	Transistor, 2SC1815	1
Q212	4 2039 70431	Transistor, 2SC1815	1
Q213	4 2039 70431	Transistor, 2SC1815	1
Q214	4 2039 70431	Transistor, 2SC1815	1
Q215	4 2039 70431	Transistor, 2SC1815	1
Q216	4 2039 70431	Transistor, 2SC1815	1
Q301	4 2039 70431	Transistor, 2SC1815	1
Q302	4 2039 70431	Transistor, 2SC1815	1
Q303	4 2039 70431	Transistor, 2SC1815	1
Q304	4 2039 70431	Transistor, 2SC1815	1
Q305	4 2039 70431	Transistor, 2SC1815	1
Q306	4 2039 70431	Transistor, 2SC1815	1

PARTS LIST (Continued)

Ref. No.	Part No.	Description	Q'ty
PRE-AMPLIFIER P.C.B. ASSY			
Q307	4 2039 70431	Transistor, 2SC1815	1
Q308	4 2039 70431	Transistor, 2SC1815	1
R101	RD2 2 3251 JM000	Carbon 22 k ohm 1/4W ±5%	1
R102	RD1 0 3251 JM000	Carbon 10 k ohm 1/4W ±5%	1
R104	RD2 7 4251 JM000	Carbon 270 k ohm 1/4W ±5%	1
R105	RD1 5 4251 JM000	Carbon 150 k ohm 1/4W ±5%	1
R106	RD1 5 1251 JM000	Carbon 150 ohm 1/4W ±5%	1
R107	RD1 0 2251 JM000	Carbon 1 k ohm 1/4W ±5%	1
R108	RD1 5 3251 JM000	Carbon 15 k ohm 1/4W ±5%	1
R109	RD8 2 2251 JM000	Carbon 8.2 k ohm 1/4W ±5%	1
R110	RD2 2 2251 JM000	Carbon 2.2 k ohm 1/4W ±5%	1
R111	RD1 1 3251 JM000	Carbon 11 k ohm 1/4W ±5%	1
R112	RD5 6 4251 JM000	Carbon 560 k ohm 1/4W ±5%	1
R113	RD2 7 2251 JM000	Carbon 2.7 k ohm 1/4W ±5%	1
R115	RD2 2 2251 JM000	Carbon 2.2 k ohm 1/4W ±5%	1
R116	RD2 7 4251 JM000	Carbon 270 k ohm 1/4W ±5%	1
R117	RD2 7 4251 JM000	Carbon 270 k ohm 1/4W ±5%	1
R118	RD5 6 4251 JM000	Carbon 560 k ohm 1/4W ±5%	1
R119	RD4 7 3251 JM000	Carbon 47 k ohm 1/4W ±5%	1
R120	RD1 0 5251 JM000	Carbon 1M ohm 1/4W ±5%	1
R121	RD1 8 1251 JM000	Carbon 180 ohm 1/4W ±5%	1
R122	RD4 7 3251 JM000	Carbon 47 k ohm 1/4W ±5%	1
R123	RD4 7 3251 JM000	Carbon 47 k ohm 1/4W ±5%	1
R124	RD3 3 2251 JM000	Carbon 3.3 k ohm 1/4W ±5%	1
R125	RD1 0 5251 JM000	Carbon 1M ohm 1/4W ±5%	1
R126	RD1 2 3251 JM000	Carbon 12 k ohm 1/4W ±5%	1
R128	RD1 0 2251 JM000	Carbon 1 k ohm 1/4W ±5%	1
R129	RD4 7 2251 JM000	Carbon 4.7 k ohm 1/4W ±5%	1
R130	RD4 7 3251 JM000	Carbon 47 k ohm 1/4W ±5%	1
R131	RD1 8 3251 JM000	Carbon 18 k ohm 1/4W ±5%	1
R132	RD1 0 1251 JM000	Carbon 100 ohm 1/4W ±5%	1
R133	RD4 7 2251 JM000	Carbon 4.7 k ohm 1/4W ±5%	1
R135	RD4 7 3251 JM000	Carbon 47 k ohm 1/4W ±5%	1
R136	RD4 7 3251 JM000	Carbon 47 k ohm 1/4W ±5%	1
R137	RD4 7 3251 JM000	Carbon 47 k ohm 1/4W ±5%	1
R138	RD1 2 4251 JM000	Carbon 120 k ohm 1/4W ±5%	1
R139	RD1 2 3251 JM000	Carbon 12 k ohm 1/4W ±5%	1
R140	RD1 0 2251 JM000	Carbon 1 k ohm 1/4W ±5%	1
R141	RD2 7 2251 JM000	Carbon 2.7 k ohm 1/4W ±5%	1
R142	RD6 8 1251 JM000	Carbon 680 ohm 1/4W ±5%	1
R143	RD2 7 2251 JM000	Carbon 2.7 k ohm 1/4W ±5%	1
R144	RD3 9 2251 JM000	Carbon 3.9 k ohm 1/4W ±5%	1
R145	RD1 5 3251 JM000	Carbon 15 k ohm 1/4W ±5%	1
R146	RD1 0 1251 JM000	Carbon 100 ohm 1/4W ±5%	1
R147	RD5 6 2251 JM000	Carbon 5.6 k ohm 1/4W ±5%	1
R148	RD1 0 1251 JM000	Carbon 100 ohm 1/4W ±5%	1
R149	RD1 2 2251 JM000	Carbon 1.2 k ohm 1/4W ±5%	1
R150	RD1 0 1251 JM000	Carbon 100 ohm 1/4W ±5%	1
R151	RD1 8 2251 JM000	Carbon 1.8 k ohm 1/4W ±5%	1
R152	RD4 7 3251 JM000	Carbon 47 k ohm 1/4W ±5%	1
R153	RD4 7 3251 JM000	Carbon 47 k ohm 1/4W ±5%	1
R154	RD4 7 3251 JM000	Carbon 47 k ohm 1/4W ±5%	1
R155	RD1 0 3251 JM000	Carbon 10 k ohm 1/4W ±5%	1
R156	RD1 0 3251 JM000	Carbon 10 k ohm 1/4W ±5%	1
R157	RD1 8 2251 JM000	Carbon 1.8 k ohm 1/4W ±5%	1
R158	RD4 7 2251 JM000	Carbon 4.7 k ohm 1/4W ±5%	1
R159	RD1 0 3251 JM000	Carbon 10 k ohm 1/4W ±5%	1
R160	RD1 5 3251 JM000	Carbon 15 k ohm 1/4W ±5%	1
R170	RD3 3 2251 JM000	Carbon 3.3 k ohm 1/4W ±5%	1
R171	RD1 0 4251 JM000	Carbon 100 k ohm 1/4W ±5%	1
R172	RD1 5 3251 JM000	Carbon 15 k ohm 1/4W ±5%	1
R173	RD1 0 1251 JM000	Carbon 100 ohm 1/4W ±5%	1
R174	RD6 8 1251 JM000	Carbon 680 ohm 1/4W ±5%	1
R175	RD8 2 0251 JM000	Carbon 82 ohm 1/4W ±5%	1
R176	RD3 9 2251 JM000	Carbon 3.9 k ohm 1/4W ±5%	1
R180	RD1 0 3251 JM000	Carbon 10 k ohm 1/4W ±5%	1
R181	RD1 8 4251 JM000	Carbon 180 k ohm 1/4W ±5%	1
R182	RD1 0 3251 JM000	Carbon 10 k ohm 1/4W ±5%	1
R183	RD3 3 2251 JM000	Carbon 3.3 k ohm 1/4W ±5%	1
R184	RD1 2 1251 JM000	Carbon 120 ohm 1/4W ±5%	1
R185	RD1 8 2251 JM000	Carbon 1.8 k ohm 1/4W ±5%	1
R186	RD2 7 2251 JM000	Carbon 2.7 k ohm 1/4W ±5%	1
R201	RD2 2 3251 JM000	Carbon 22 k ohm 1/4W ±5%	1
R202	RD1 0 3251 JM000	Carbon 10 k ohm 1/4W ±5%	1
R204	RD2 7 4251 JM000	Carbon 270 k ohm 1/4W ±5%	1
R205	RD1 5 4251 JM000	Carbon 150 k ohm 1/4W ±5%	1
R206	RD1 5 1251 JM000	Carbon 150 ohm 1/4W ±5%	1
R207	RD1 0 2251 JM000	Carbon 1 k ohm 1/4W ±5%	1
R208	RD1 5 3251 JM000	Carbon 15 k ohm 1/4W ±5%	1
R209	RD8 2 2251 JM000	Carbon 8.2 k ohm 1/4W ±5%	1
R210	RD2 2 2251 JM000	Carbon 2.2 k ohm 1/4W ±5%	1
R211	RD1 1 3251 JM000	Carbon 11 k ohm 1/4W ±5%	1
R212	RD5 6 4251 JM000	Carbon 560 k ohm 1/4W ±5%	1
R213	RD2 7 2251 JM000	Carbon 2.7 k ohm 1/4W ±5%	1
R215	RD2 2 2251 JM000	Carbon 2.2 k ohm 1/4W ±5%	1
R216	RD2 7 4251 JM000	Carbon 270 k ohm 1/4W ±5%	1
R217	RD2 7 4251 JM000	Carbon 270 k ohm 1/4W ±5%	1
R218	RD5 6 4251 JM000	Carbon 560 k ohm 1/4W ±5%	1
R219	RD4 7 3251 JM000	Carbon 47 k ohm 1/4W ±5%	1
R220	RD1 0 5251 JM000	Carbon 1M ohm 1/4W ±5%	1
R221	RD1 8 1251 JM000	Carbon 180 ohm 1/4W ±5%	1
R222	RD4 7 3251 JM000	Carbon 47 k ohm 1/4W ±5%	1
R223	RD4 7 3251 JM000	Carbon 47 k ohm 1/4W ±5%	1
R224	RD3 3 2251 JM000	Carbon 3.3 k ohm 1/4W ±5%	1
R225	RD1 0 5251 JM000	Carbon 1M ohm 1/4W ±5%	1
R226	RD1 2 3251 JM000	Carbon 12 k ohm 1/4W ±5%	1
R228	RD1 0 2251 JM000	Carbon 1 k ohm 1/4W ±5%	1
R229	RD4 7 2251 JM000	Carbon 4.7 k ohm 1/4W ±5%	1
R230	RD4 7 3251 JM000	Carbon 47 k ohm 1/4W ±5%	1
R231	RD1 8 3251 JM000	Carbon 18 k ohm 1/4W ±5%	1
R232	RD1 0 1251 JM000	Carbon 100 ohm 1/4W ±5%	1
R233	RD4 7 2251 JM000	Carbon 4.7 k ohm 1/4W ±5%	1
R235	RD4 7 3251 JM000	Carbon 47 k ohm 1/4W ±5%	1
R236	RD4 7 3251 JM000	Carbon 47 k ohm 1/4W ±5%	1
R237	RD4 7 3251 JM000	Carbon 47 k ohm 1/4W ±5%	1
R238	RD1 2 4251 JM000	Carbon 120 k ohm 1/4W ±5%	1
R239	RD1 2 3251 JM000	Carbon 12 k ohm 1/4W ±5%	1
R240	RD1 0 2251 JM000	Carbon 1 k ohm 1/4W ±5%	1
R241	RD2 7 2251 JM000	Carbon 2.7 k ohm 1/4W ±5%	1
R242	RD6 8 1251 JM000	Carbon 680 ohm 1/4W ±5%	1
R243	RD2 7 2251 JM000	Carbon 2.7 k ohm 1/4W ±5%	1
R244	RD3 9 2251 JM000	Carbon 3.9 k ohm 1/4W ±5%	1
R245	RD1 5 3251 JM000	Carbon 15 k ohm 1/4W ±5%	1
R246	RD1 0 1251 JM000	Carbon 100 ohm 1/4W ±5%	1
R247	RD5 6 2251 JM000	Carbon 5.6 k ohm 1/4W ±5%	1
R248	RD1 0 1251 JM000	Carbon 100 ohm 1/4W ±5%	1
R249	RD1 2 2251 JM000	Carbon 1.2 k ohm 1/4W ±5%	1
R250	RD1 0 1251 JM000	Carbon 100 ohm 1/4W ±5%	1
R251	RD1 8 2251 JM000	Carbon 1.8 k ohm 1/4W ±5%	1
R252	RD4 7 3251 JM000	Carbon 47 k ohm 1/4W ±5%	1
R253	RD4 7 3251 JM000	Carbon 47 k ohm 1/4W ±5%	1
R254	RD4 7 3251 JM000	Carbon 47 k ohm 1/4W ±5%	1
R255	RD1 0 3251 JM000	Carbon 10 k ohm 1/4W ±5%	1
R256	RD1 0 3251 JM000	Carbon 10 k ohm 1/4W ±5%	1
R257	RD1 8 2251 JM000	Carbon 1.8 k ohm 1/4W ±5%	1
R258	RD4 7 2251 JM000	Carbon 4.7 k ohm 1/4W ±5%	1
R259	RD1 0 3251 JM000	Carbon 10 k ohm 1/4W ±5%	1
R260	RD1 5 3251 JM000	Carbon 15 k ohm 1/4W ±5%	1
R270	RD3 3 2251 JM000	Carbon 3.3 k ohm 1/4W ±5%	1
R271	RD1 0 4251 JM000	Carbon 100 k ohm 1/4W ±5%	1
R272	RD1 5 3251 JM000	Carbon 15 k ohm 1/4W ±5%	1
R273	RD1 0 1251 JM000	Carbon 100 ohm 1/4W ±5%	1
R274	RD6 8 1251 JM000	Carbon 680 ohm 1/4W ±5%	1
R275	RD8 2 0251 JM000	Carbon 82 ohm 1/4W ±5%	1
R276	RD3 9 2251 JM000	Carbon 3.9 k ohm 1/4W ±5%	1
R280	RD1 0 3251 JM000	Carbon 10 k ohm 1/4W ±5%	1
R281	RD1 8 4251 JM000	Carbon 180k ohm 1/4W ±5%	1
R282	RD1 0 3251 JM000	Carbon 10 k ohm 1/4W ±5%	1
R283	RD3 3 2251 JM000	Carbon 3.3 k ohm 1/4W ±5%	1
R284	RD1 2 1251 JM000	Carbon 120 ohm 1/4W ±5%	1

PARTS LIST (Continued)

Ref. No.	Part No.	Description	Q'ty
		PRE-AMPLIFIER P.C.B. ASSY	
R285	RD1 8 2251 JM000	Carbon 1.8 k ohm 1/4W ±5%	1
R286	RD2 7 2251 JM000	Carbon 2.7 k ohm 1/4W ±5%	1
R301	RD8 2 3251 JM000	Carbon 82 k ohm 1/4W ±5%	1
R302	RD8 2 3251 JM000	Carbon 82 k ohm 1/4W ±5%	1
R303	RD1 0 0251 JM000	Carbon 10 ohm 1/4W ±5%	1
R304	RD2 2 2251 JM000	Carbon 2.2 k ohm 1/4W ±5%	1
R305	RD5 6 2251 JM000	Carbon 5.6 k ohm 1/4W ±5%	1
R306	RH1 2 1102 KZ000	Metal 120 ohm 1W ±10%	1
R307	RD1 8 1251 JM000	Carbon 180 ohm 1/4W ±5%	1
R308	RD2 7 1251 JM000	Carbon 270 ohm 1/4W ±5%	1
R309	RD4 7 2251 JM000	Carbon 4.7 k ohm 1/4W ±5%	1
R310	RD1 2 2251 JM000	Carbon 1.2 k ohm 1/4W ±5%	1
R311	RD8 2 2251 JM000	Carbon 8.2 k ohm 1/4W ±5%	1
R312	RD1 2 2251 JM000	Carbon 1.2 k ohm 1/4W ±5%	1
R313	RD2 2 2251 JM000	Carbon 2.2 k ohm 1/4W ±5%	1
R314	RD2 2 2251 JM000	Carbon 2.2 k ohm 1/4W ±5%	1
R315	RD2 2 2251 JM000	Carbon 2.2 k ohm 1/4W ±5%	1
R316	RD1 0 3251 JM000	Carbon 10 k ohm 1/4W ±5%	1
R317	RD5 6 1251 JM000	Carbon 560 ohm 1/4W ±5%	1
R318	RD1 2 2251 JM000	Carbon 1.2 k ohm 1/4W ±5%	1
R319	RD1 2 2251 JM000	Carbon 1.2 k ohm 1/4W ±5%	1
R320	RD1 2 2251 JM000	Carbon 1.2 k ohm 1/4W ±5%	1
R321	RD3 9 3251 JM000	Carbon 39 k ohm 1/4W ±5%	1
R322	RD4 7 2251 JM000	Carbon 4.7 k ohm 1/4W ±5%	1
R323	RD1 5 3251 JM000	Carbon 15 k ohm 1/4W ±5%	1
R324	RD2 7 2251 JM000	Carbon 2.7 k ohm 1/4W ±5%	1
R325	RD5 6 2251 JM000	Carbon 5.6 k ohm 1/4W ±5%	1
R326	RD1 8 2251 JM000	Carbon 1.8 k ohm 1/4W ±5%	1
R327	RD6 8 3251 JM000	Carbon 68 k ohm 1/4W ±5%	1
R328	RD1 0 3251 JM000	Carbon 10 k ohm 1/4W ±5%	1
R329	RH3 9 1102 KZ000	Metal 390 ohm 1W ±10%	1
R330	RD8 2 3251 JM000	Carbon 82 k ohm 1/4W ±5%	1
S1	4 2319 73900	Slide Switch (Record/Play)	1
S2	4 2319 74450	Push Switch (Tape Select)	1
S3	4 2319 74470	Push Switch (DOLBY NR)	1
S4	4 2319 74470	Push Switch (Input Select)	1
		CONTROL P.C.B. ASSY	
	4 1329 75751	Control P.C.B. Assy	1
	141 2 4729 05800	Staple 15	8
C1	CC1 0 3500 KE00C	Ceramic 0.01 µF 50V ±10%	1
C2	CC1 0 3500 KE00C	Ceramic 0.01 µF 50V ±10%	1
C3	CC1 0 3500 KE00C	Ceramic 0.01 µF 50V ±10%	1
C4	CC1 0 3500 KE00C	Ceramic 0.01 µF 50V ±10%	1
C5	CC1 0 3500 KE00C	Ceramic 0.01 µF 50V ±10%	1
C6	CC1 0 3500 KE00C	Ceramic 0.01 µF 50V ±10%	1
C7	CC1 0 3500 KE00C	Ceramic 0.01 µF 50V ±10%	1
C8	CC4 7 3500 ZG00C	Ceramic 0.047 µF 50V +80, −20%	1
C9	CC4 7 3500 ZG00C	Ceramic 0.047 µF 50V +80, −20%	1
C10	CC4 7 3500 ZG00C	Ceramic 0.047 µF 50V +80, −20%	1
C11	CC4 7 3500 ZG00C	Ceramic 0.047 µF 50V +80, −20%	1
C12	CD2 2 8250 0001V	Electrolytic 2200 µF 25V	1
C13	CD1 0 8500 0001V	Electrolytic 1000 µF 50V	1
C14	CD4 7 7160 0001V	Electrolytic 470 µF 16V	1
C15	CD4 7 7250 0001V	Electrolytic 470 µF 25V	1
C16	CD1 0 8160 0001V	Electrolytic 1000 µF 16V	1
C18	CD1 0 8160 0001V	Electrolytic 1000 µF 16V	1
C19	4 2239 70600	Capacitor 10 µF 16V ±10%	1
C20	CA2 2 5100 M000V	Aluminum 2.2 µF 10V ±20%	1
C21	CD4 7 4100 0000V	Electrolytic 0.47 µF 10V	1
C22	CD1 0 7100 0001V	Electrolytic 100 µF 10V	1
C23	CD2 2 5100 0000V	Electrolytic 2.2 µF 10V	1
C24	CD4 7 5100 0000V	Electrolytic 4.7 µF 10V	1
C25	4 2239 70600	Capacitor 10 µF 16V ±10%	1
C26	CD1 0 5100 0000V	Electrolytic 1 µF 10V	1
C27	CD4 7 6100 0001V	Electrolytic 47 µF 10V	1
C28	CD3 3 6100 0001V	Electrolytic 33 µF 10V	1
C29	CD4 7 6100 0001V	Electrolytic 47 µF 10V	1
C30	CD1 0 7100 0001V	Electrolytic 100 µF 10V	1
C31	CD4 7 763A 0001V	Electrolytic 470 µF 6.3V	1

Ref. No.	Part No.	Description	Q'ty
		CONTROL P.C.B. ASSY	
CN1	4 2369 71650	Connector 13P	1
CN2	4 2369 73110	Connector 4P	1
CN3	4 2369 73100	Connector 3P	1
CN4	4 2369 73120	Connector 12P	1
D1	4 2029 70620	Bridge Diode	1
D2	4 2029 70620	Bridge Diode	1
D3	202 5 3210 13020	Diode, GZA13U	1
D4	202 5 3210 24020	Diode, GZA24U	1
D5	202 5 3210 08210	Diode, GZA8.2L	1
D6	202 5 3880 44810	Diode, DS448	1
D7	202 5 3880 44810	Diode, DS448	1
D8	202 5 3880 44810	Diode, DS448	1
D9	202 5 3880 44810	Diode, DS448	1
D10	202 5 3880 44810	Diode, DS448	1
D11	202 5 3880 44810	Diode, DS448	1
D12	202 5 3880 44810	Diode, DS448	1
D13	202 5 3880 44810	Diode, DS448	1
D14	202 5 3880 44810	Diode, DS448	1
D15	202 5 3880 44810	Diode, DS448	1
D16	202 5 3880 44810	Diode, DS448	1
D17	202 5 3880 44810	Diode, DS448	1
D18	202 5 3880 44810	Diode, DS448	1
D19	202 5 3880 44810	Diode, DS448	1
D20	202 5 3880 44810	Diode, DS448	1
D21	202 5 3880 44810	Diode, DS448	1
D22	202 5 3880 44810	Diode, DS448	1
D23	202 5 3880 44810	Diode, DS448	1
D24	202 5 3880 44810	Diode, DS448	1
D25	202 5 3880 44810	Diode, DS448	1
D26	202 5 3880 44810	Diode, DS448	1
D27	202 5 3880 44810	Diode, DS448	1
D28	202 5 3880 44810	Diode, DS448	1
D29	202 5 3880 44810	Diode, DS448	1
D30	202 5 3880 44810	Diode, DS448	1
D31	202 5 3880 44810	Diode, DS448	1
D32	202 5 3880 44810	Diode, DS448	1
D33	202 5 3880 44810	Diode, DS448	1
D34	202 5 3880 44810	Diode, DS448	1
D35	202 5 3880 44810	Diode, DS448	1
D36	202 5 3880 44810	Diode, DS448	1
D37	202 5 3880 44810	Diode, DS448	1
D38	202 5 3880 44810	Diode, DS448	1
D39	202 5 2450 13540	Diode, DS135	1
D40	202 5 2450 13540	Diode, DS135	1
D41	202 5 2450 13540	Diode, DS135	1
D46	202 5 3880 44810	Diode, DS448	1
D48	202 5 3880 44810	Diode, DS448	1
F1	⚠ 4 2349 70370	Fuse (1.6 A)	1
F2	⚠ 4 2349 70380	Fuse (630 mA)	1
	⚠ 4 2359 70910	Fuse Holer	4
IC1	4 2069 70390	IC, TC9121P	1
IC2	4 2069 70310	IC, MC14011B	1
IC3	4 2069 70310	IC, MC14011B	1
IC4	4 2069 70310	IC, MC14011B	1
Q1	4 2039 70431	Transistor, 2SC1815	1
Q2	4 2039 70431	Transistor, 2SC1815	1
Q3	4 2039 70431	Transistor, 2SC1815	1
Q4	4 2039 70431	Transistor, 2SC1815	1
Q5	4 2039 70431	Transistor, 2SC1815	1
Q6	203 5 4580 69860	Transistor, 2SB698	1
Q7	203 5 6940 54560	Transistor, 2SD545	1
Q8	203 5 6940 54560	Transistor, 2SD545	1
Q9	203 5 6940 54560	Transistor, 2SD545	1
Q10	203 5 6940 54560	Transistor, 2SD545	1
Q11	203 5 6940 54560	Transistor, 2SD545	1
Q12	203 5 6940 54560	Transistor, 2SD545	1
Q20	4 2039 70431	Transistor, 2SC1815	1
Q22	4 2039 70601	Transistor, 2SC1846	1
Q24	4 2039 70432	Transistor, 2SC1815	1
R1	RD5 6 1251 JM000	Carbon 560 ohm 1/4W ±5%	1

PARTS LIST (Continued)

Ref. No.	Part No.	Description	Q'ty
CONTROL P.C.B. ASSY			
R2	RD1 0 0251 JM000	Carbon 10 ohm 1/4W ±5%	1
R3	4 2359 70340	Fuse Resistor 27 ohm	1
R4	RD1 0 2251 JM000	Carbon 1 k ohm 1/4W ±5%	1
R5	RD1 0 0251 JM000	Carbon 10 ohm 1/4W ±5%	1
R6	RD3 3 3251 JM000	Carbon 33 k ohm 1/4W ±5%	1
R7	RD2 7 2251 JM000	Carbon 2.7 k ohm 1/4W ±5%	1
R8	RD2 7 2251 JM000	Carbon 2.7 k ohm 1/4W ±5%	1
R9	RD1 0 2251 JM000	Carbon 1 k ohm 1/4W ±5%	1
R10	RD1 0 3251 JM000	Carbon 10 k ohm 1/4W ±5%	1
R11	RD1 5 4251 JM000	Carbon 150 k ohm 1/4W ±5%	1
R12	RD1 0 3251 JM000	Carbon 10 k ohm 1/4W ±5%	1
R13	RD3 3 2251 JM000	Carbon 3.3 k ohm 1/4W ±5%	1
R14	RD1 5 4251 JM000	Carbon 150 k ohm 1/4W ±5%	1
R15	RD3 3 3251 JM000	Carbon 33 k ohm 1/4W ±5%	1
R16	RD3 3 2251 JM000	Carbon 3.3 k ohm 1/4W ±5%	1
R17	RD1 0 3251 JM000	Carbon 10 k ohm 1/4W ±5%	1
R18	RD1 0 3251 JM000	Carbon 10 k ohm 1/4W ±5%	1
R19	RD1 0 2251 JM000	Carbon 1 k ohm 1/4W ±5%	1
R20	RD1 0 5251 JM000	Carbon 1M ohm 1/4W ±5%	1
R21	RD1 0 3251 JM000	Carbon 10 k ohm 1/4W ±5%	1
R23	RD5 6 1251 JM000	Carbon 560 ohm 1/4W ±5%	1
R24	RD1 0 4251 JM000	Carbon 100 k ohm 1/4W ±5%	1
R25	RD1 0 3251 JM000	Carbon 10 k ohm 1/4W ±5%	1
R26	RD1 0 1251 JM000	Carbon 100 ohm 1/4W ±5%	1
R27	RD1 0 3251 JM000	Carbon 10 k ohm 1/4W ±5%	1
R28	RD1 5 4251 JM000	Carbon 150 k ohm 1/4W ±5%	1
R29	RD3 3 3251 JM000	Carbon 33 k ohm 1/4W ±5%	1
R30	RD8 2 1251 JM000	Carbon 820 ohm 1/4W ±5%	1
R31	RD8 2 1251 JM000	Carbon 820 ohm 1/4W ±5%	1
R32	RD3 3 2251 JM000	Carbon 3.3 k ohm 1/4W ±5%	1
R33	RD1 5 4251 JM000	Carbon 150 k ohm 1/4W ±5%	1
R34	RD1 0 3251 JM000	Carbon 10 k ohm 1/4W ±5%	1
R35	RD1 5 4251 JM000	Carbon 150 k ohm 1/4W ±5%	1
R36	RD1 0 3251 JM000	Carbon 10 k ohm 1/4W ±5%	1
R37	RD2 2 4251 JM000	Carbon 220 k ohm 1/4W ±5%	1
R38	RD1 0 3251 JM000	Carbon 10 k ohm 1/4W ±5%	1
R39	RD5 1 4251 JM000	Carbon 510 k ohm 1/4W ±5%	1
R40	RD1 0 3251 JM000	Carbon 10 k ohm 1/4W ±5%	1
R41	RD3 3 2251 JM000	Carbon 3.3 k ohm 1/4W ±5%	1
R42	RD1 5 4251 JM000	Carbon 150 k ohm 1/4W ±5%	1
R43	RD3 3 3251 JM000	Carbon 33 k ohm 1/4W ±5%	1
R44	RD1 0 3251 JM000	Carbon 10 k ohm 1/4W ±5%	1
R45	RD4 7 3251 JM000	Carbon 47 k ohm 1/4W ±5%	1
R46	RD4 7 1251 JM000	Carbon 470 ohm 1/4W ±5%	1
R47	RD1 0 2251 JM000	Carbon 1 k ohm 1/4W ±5%	1
R48	RD4 7 1251 JM000	Carbon 470 ohm 1/4W ±5%	1
R49	RD1 0 2251 JM000	Carbon 1 k ohm 1/4W ±5%	1
R50	RD4 7 1251 JM000	Carbon 470 ohm 1/4W ±5%	1
R51	RD1 0 2251 JM000	Carbon 1 k ohm 1/4W ±5%	1
R52	RD1 0 3251 JM000	Carbon 10 k ohm 1/4W ±5%	1
R53	RD1 0 2251 JM000	Carbon 1 k ohm 1/4W ±5%	1
R54	RD5 6 1251 JM000	Carbon 560 ohm 1/4W ±5%	1
R70	RD2 7 2251 JM000	Carbon 2.7 k ohm 1/4W ±5%	1
R71	RD4 7 2251 JM000	Carbon 4.7 k ohm 1/4W ±5%	1
R72	RD5 6 1251 JM000	Carbon 560 ohm 1/4W ±5%	1
R73	RD8 2 1251 JM000	Carbon 820 ohm 1/4W ±5%	1
R74	RD3 3 A251 JS000	Carbon 3.3 ohm 1/4W ±5%	1
R75	RD1 0 2251 JM000	Carbon 1k ohm 1/4W ±5%	1
R76	RD1 0 4251 JM000	Carbon 100 k ohm 1/4W ±5%	1
	141 2 4729 04700	Staple 10	29
SUB CONTROL P.C.B. ASSY			
	4 1329 75770	Sub Control P.C.B. Assy	1
	141 2 3689 07400	Bracket	1
	103 3 1302 60511	Screw, Pan Hd. Tapping-2 +M2.6x5	2
	101 3 1303 00511	Screw, Pan Hd. +M3.0x5	1
	141 2 4729 04700	Staple 10	3
	201 2 5010 01401	Mica Sheet (for IC5)	1
C32	CD1 0 7100 0001V	Electrolytic 100 µF 10V	1
C33	CD1 0 6160 0001V	Electrolytic 10 µF 16V	1
SUB CONTROL P.C.B. ASSY			
C34	CM4 7 3500 K00SV	Mylar 0.047 µF 50V ±10%	1
C35	CD1 0 6160 0001V	Electrolytic 10 µF 16V	1
C36	CD1 0 5160 0000V	Electrolytic 1 µF 16V	1
C37	4 2239 70190	Capacitor 0.1 µF 12V	1
D29	202 5 2810 44255	Diode, DS442	1
D30	202 5 2810 44255	Diode, DS442	1
Q13	203 5 4580 69860	Transistor, 2SB698	1
Q14	203 5 4580 69860	Transistor, 2SB698	1
Q15	4 2039 70431	Transistor, 2SC1815	1
Q16	4 2039 70431	Transistor, 2SC1815	1
Q17	203 5 6940 54560	Transistor, 2SD545	1
Q18	203 5 6940 54560	Transistor, 2SD545	1
Q19	4 2039 70431	Transistor, 2SC1815	1
IC5	4 2069 70870	IC, µPC1447H	1
R55	RD4 7 2251 JN000	Carbon 4.7 k ohm 1/4W ±5%	1
R56	RD4 7 2251 JN000	Carbon 4.7 k ohm 1/4W ±5%	1
R57	RD1 5 2251 JN000	Carbon 1.5 k ohm 1/4W ±5%	1
R58	RD1 5 2251 JN000	Carbon 1.5 k ohm 1/4W ±5%	1
R59	RD5 6 1251 JN000	Carbon 560 ohm 1/4W ±5%	1
R60	RD5 6 1251 JN000	Carbon 560 ohm 1/4W ±5%	1
R61	RH3 3 0102 KZ000	Metal 33 ohm 1W ±10%	1
R62	RD8 2 1251 JN000	Carbon 820 ohm 1/4W ±5%	1
R63	RD9 1 1251 JN000	Carbon 910 ohm 1/4W ±5%	1
R64	RD1 0 2251 JN000	Carbon 1 k ohm 1/4W ±5%	1
R65	RD2 7 4251 JN000	Carbon 270 k ohm 1/4W ±5%	1
R66	RD1 8 3251 JN000	Carbon 18 k ohm 1/4W ±5%	1
R67	RD1 0 3251 JN000	Carbon 10 k ohm 1/4W ±5%	1
R68	RD1 0 1251 JN000	Carbon 100 ohm 1/4W ±5%	1
TRANSISTOR P.C.B. ASSY			
	4 1329 75780	Transistor P.C.B. Assy	1
	4 2269 33670	Transistor P.C.B.	1
Q21	203 5 7330 61261	Transistor, 2SD612K	1
SWITCH P.C.B. ASSY			
	4 1329 75980	Switch P.C.B. Assy	1
D47	202 5 3880 44810	Diode, DS448	1
	4 2269 33850	Switch P.C.B.	1
R22	RD1 0 2251 JM000	Carbon 1 k ohm 1/4W ±5%	1
S5	4 2319 74440	Push Switch (Timer Record)	1
VOLUME CONTROL P.C.B. ASSY			
	4 1329 76470	Volume Control P.C.B. Assy	1
VR101	4 2229 71643	Volume Control, Left (Input Level, A-50k)	1
VR201	4 2229 71643	Volume Control, Right (Input Level, A-50k)	1
	4 2269 34020	Volume P.C.B.	1
INPUT/DOLBY INDICATOR P.C.B. ASSY			
	4 1329 76480	Input/DOLBY Indicator P.C.B. Assy	1
	4 2269 33271	Input Microphone P.C.B	1
D306	4 2029 70880	LED, SLP-144B (Microphone)	1
D313	4 2029 70881	LED, SLP-244B (DOLBY)	1
PEAK INDICATOR P.C.B. ASSY			
	4 1329 76490	Peak Indicator P.C.B. Assy	1
	4 2269 33270	Indicator P.C.B.	1
D310	4 2029 70880	LED, SLP-144B (+6 VU)	1
D311	4 2029 70880	LED, SLP-144B (+3 VU)	1
D312	4 2029 70880	LED, SLP-144B (0 VU)	1
TAPE INDICATOR P.C.B. ASSY			
	4 1329 76500	Tape Indicator P.C.B. Assy	1
	4 2269 33272	Tape Select P.C.B.	1
D307	4 2029 70880	LED, SLP-144B (Normal)	1
D308	4 2029 70880	LED, SLP-144B (CrO2)	1
D309	4 2029 70880	LED, SLP-144B (Metal)	1

PARTS LIST (Continued)

Ref. No.	Part No.	Description	Q'ty
COMPLETED D.D. MOTOR			
M1	4 5279 71030	Completed D.D. Motor	1
	141 0 5729 04100	Holder Assy	1
	141 0 5219 07100	Flywheel Assy	1
	141 2 4539 06900	Washer	2
	141 2 8519 89000	Spring, Motor Adjust	4
	101 3 1302 60611	Screw, Pan Hd. +M2.6x6	4
	141 0 3519 19100	DD Governor P.C.B. Assy	1
D.D. GOVERNOR P.C.B. ASSY			
	141 0 3519 19100	D.D. Governor P.C.B. Assy	1
	141 2 3519 51200	Flywheel Bracket	1
	141 2 7519 51500	Screw, Support Post	1
	141 2 4219 10300	Screw, Flywheel Support	1
	141 2 4179 00700	Nut, Dial Shaft	1
	101 3 1202 00823	Screw, Flat Hd. +M2.0x8	6
C601	CD1 0 5160 0000V	Electrolytic 1 µF 16V	1
C602	CD1 0 4250 0000V	Electrolytic 0.1 µF 25V	1
C603	CD1 0 4250 0000V	Electrolytic 0.1 µF 25V	1
C604	CD1 0 4250 0000V	Electrolytic 0.1 µF 25V	1
C605	CD1 0 4250 0000V	Electrolytic 0.1 µF 25V	1
C606	CM1 8 3500 J00SV	Mylar 0.018 µF 50V ±5%	1
C607	CC8 2 2500 KE00C	Ceramic 0.0082 µF 50V ±10%	1
C608	CC8 2 2500 KE00C	Ceramic 0.0082 µF 50V ±10%	1
C609	CT1 0 4350 M00DV	Tantalum 0.1 µF 35V ±20%	1
C610	CD2 2 6160 0000V	Electrolytic 22 µF 16V	1
C611	CD3 3 6160 0000V	Electrolytic 33 µF 16V	1
C612	CI4 7 3250 KF00C	Boundary 0.047 µF 25V +40, −20%	1
D601	202 5 3210 12010	Diode, GZA-12L	1
IC604	206 5 2491 60110	IC, LB1601	1
Q601	203 5 4580 69860	Transistor, 2SB698	1
Q602	203 5 4580 69860	Transistor, 2SB698	1
Q603	203 5 4580 69860	Transistor, 2SB698	1
Q604	203 5 5100 53660	Transistor, 2SC536	1
Q605	203 5 5100 53660	Transistor, 2SC536	1
R601	RD1 2 4251 JV000	Carbon 120 k ohm 1/4W ±5%	1
R602	RD1 0 3251 JV000	Carbon 10 k ohm 1/4W ±5%	1
R603	RD1 0 2251 JV000	Carbon 1 k ohm 1/4W ±5%	1
R604	RD1 0 2251 JV000	Carbon 1 k ohm 1/4W ±5%	1
R605	RD1 0 2251 JV000	Carbon 1 k ohm 1/4W ±5%	1
R606	RD5 6 4251 JV000	Carbon 560 k ohm 1/4W ±5%	1
R607	RD1 0 2251 JV000	Carbon 1 k ohm 1/4W ±5%	1
R608	RD1 0 1251 JV000	Carbon 100 ohm 1/4W ±5%	1
R609	RD5 6 1251 JV000	Carbon 560 ohm 1/4W ±5%	1
R610	RD1 0 0251 JV000	Carbon 10 ohm 1/4W ±5%	1
P601	4 2229 73250	Potentiometer (B-30k)	1
L601	4 2649 70350	Armature	1
L602	4 2649 70350	Armature	1
L603	4 2649 70350	Armature	1
L604	4 2649 70350	Armature	1
L605	4 2649 70350	Armature	1
L606	4 2649 70350	Armature	1
	4 2269 33290	Detection P.C.B.	1
IC601	4 2039 70670	IC, DN6839	1
IC602	4 2039 70670	IC, DN6839	1
IC603	4 2039 70670	IC, DN6839	1
MECHANISM			
J1	4 2359 74010	Jack 1P (Microphone, Left)	1
J2	4 2359 73903	Jack 1P (Microphone, Right)	1
J3	4 2359 73902	Jack 1P (Headphones)	1
C40	⚠ 4 2239 70490	Capacitor 0.01 µF	1
S6	4 2319 74361	Leaf Switch (Interlock)	1
S7	4 2319 74361	Leaf Switch (Eject)	1
S8	⚠ 4 2319 72356	Power Switch	1
S9	⚠ 4 2319 72140	Slide Switch (Voltage Select)	1
CN5	4 2359 75130	Connector 6P Assy	1
	⚠ 4 2379 70560	Terminal	1
	4 2379 70650	Ring Terminal	1
HD1	4 2429 71570	R/P Head	1
HD2	4 2529 71580	Erase Head	1

Ref. No.	Part No.	Description	Q'ty
MECHANISM			
	⚠ 4 2439 70350	Power Cord	1
T1	⚠ 4 2519 73250	Power Transformer	1
SL1	4 2649 70370	Solenoid (Slide Base)	1
SL2	4 2649 70380	Solenoid (F.F./Rewind)	1
SL3	4 2649 70380	Solenoid (Record/Play)	1
ME1	4 5119 70642	Indicator (Meter)	1
M2	4 5279 70745	Motor (for Reel)	1
PL1	4 6129 70510	Lamp (Cassette)	1
PL2	4 6129 70480	Lamp (Meter)	1
	141 0 1149 07500	Chassis Panel Assy	1
	141 0 3119 19000	Chassis Assy	1
	141 0 3169 06000	Chassis Bracket Assy	1
	141 0 3169 06100	Chassis Bracket Assy	1
	141 0 3519 19000	Plunger Bracket Assy	1
	141 0 3719 00400	Reel Bracket Assy	1
	141 0 5319 05500	Disk Reel Assy	1
	141 0 5459 01500	Pinch Roller Arm Assy	1
	141 0 5519 07800	Idler Supporter Assy	1
	141 0 5559 06000	Idler Arm Assy	1
	141 0 7149 01700	Brake Assy	1
	141 0 7319 21800	Cassette Lid Plate Assy (Silver)	1
	141 0 7319 22300	Cassette Lid Plate Assy (Black)	1
	141 0 7319 21900	Slide Base Assy	1
	141 0 7319 22000	Slide Plate Spring Assy	1
	141 0 7419 24300	Brake Lever Assy	1
	141 0 8119 00900	Counter Assy	1
	141 2 1249 24300	Cassette Lid Frame	1
	141 2 1749 02500	Foot	4
	141 2 3119 13402	Cabinet Chassis	1
	141 2 3169 16601	Supporter Bracket	1
	141 2 3229 30300	Volume, Shield Plate	1
	141 2 3519 38200	Fix Pin Holder	1
	141 2 3519 50600	Plunger Bracket	1
	141 2 3519 50700	Switch Bracket	1
	141 2 3519 50800	Chassis Bracket	1
	141 2 3519 51000	Cassette Holder	1
	141 2 3519 51100	Cassette Holder	1
	141 2 3529 18102	Spacer, Head	1
	141 2 3719 05500	Transformer Fix	2
	141 2 3719 05600	Transformer Bracket	1
	141 2 3739 02900	Lamp Holder	1
	141 2 3769 10300	Post Link	1
	141 2 3769 10400	Post Link	1
	141 2 3899 06900	Clamp, Power Cord	1
	141 2 3899 08300	Cord Holder	1
	141 2 4359 22500	Capacitor Cover	1
	141 2 4459 03500	Cassette Case Cushion	1
	141 2 4469 31900	Cushion	1
	141 2 4469 32900	Dumper	1
	141 2 4539 01800	Washer	2
	141 2 4539 06400	Washer	2
	141 2 4539 06700	Washer	1
	141 2 4539 16200	Washer	4
	141 2 4539 21100	Washer	1
	141 2 4729 04000	Lug	1
	141 2 4729 04100	Lug	3
	141 2 5319 07000	Fin Reel	1
	141 2 5319 07001	Fin Reel	1
	141 2 5319 08400	Disk Reel	1
	141 2 5369 00400	Cap, Reel Plate	2
	141 2 5419 01000	Pinch Roller	1
	141 2 5519 37000	Spring, Disk Stopper	1
	141 2 5519 37300	Idler	1
	141 2 5519 37500	Slide Base Stopper	1
	141 2 5649 13400	Counter Belt	1
	141 2 5739 05700	Bushing	1
	141 2 6619 02800	Pulley	1
	141 2 7319 42900	Brake Slide Plate	1
	141 2 7359 02100	Record Wire	1
	141 2 7419 62401	Eject Lever	1

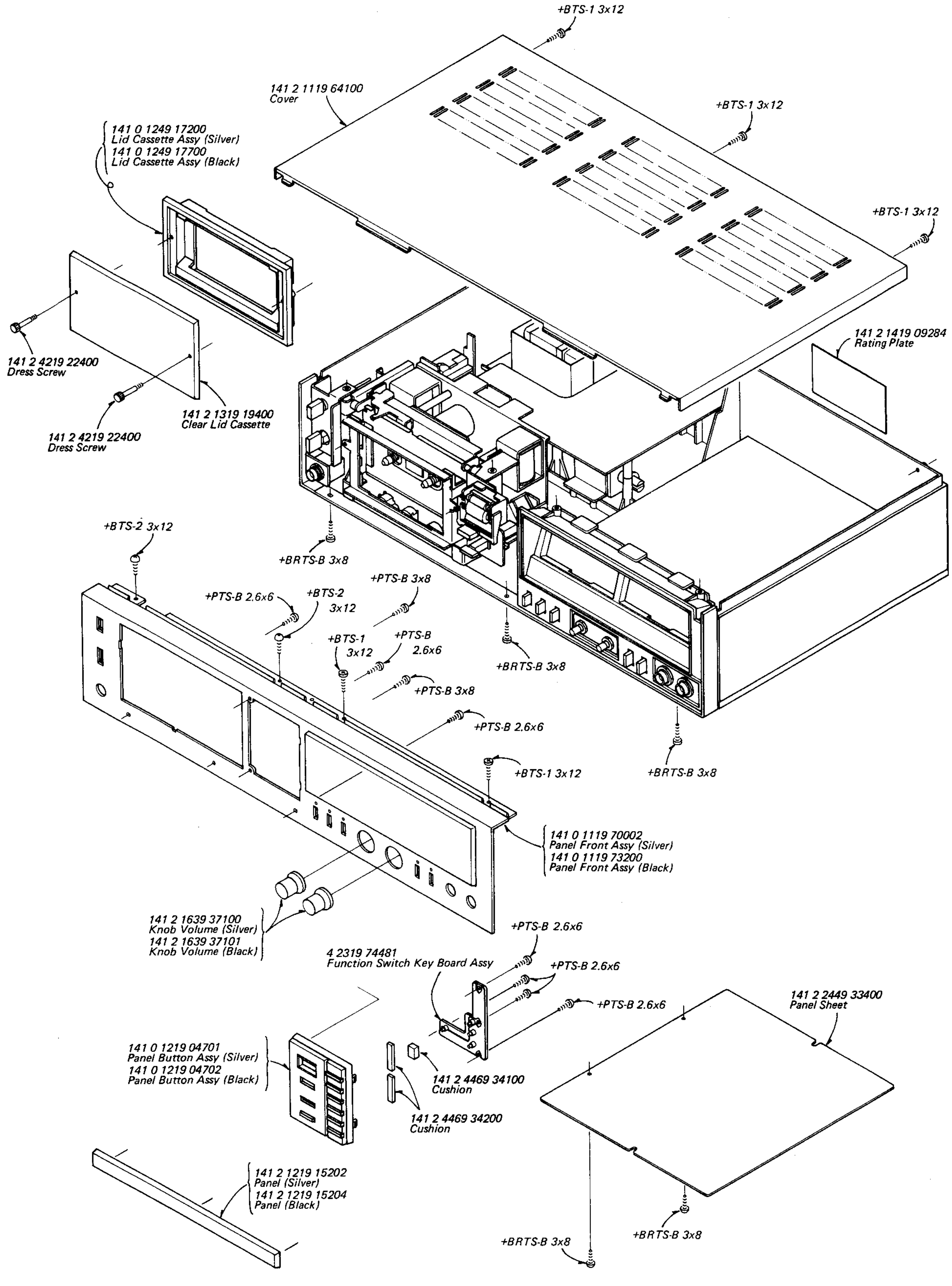
PARTS LIST (Continued)

Ref. No.	Part No.	Description	Q'ty
MECHANISM			
	141 2 7419 72600	Base Lever	1
	141 2 7419 68500	Plunger Brake Lever	1
	141 2 7419 68600	Slide Base Lever	1
	141 2 7519 51300	Pin Lid	2
	141 2 7529 58200	Spacer	2
	141 2 7529 82900	Spacer, Guide Base	3
	141 2 7529 85100	Pin Link	2
	141 2 8219 23902	Guide Ball	1
	141 2 8259 00100	Ball	1
	141 2 8259 07900	Roller	1
	141 2 8419 10300	Interlock Lever	1
	141 2 8519 01200	Spring, Power Switch Slide Arm	1
	141 2 8519 03600	Spring, Shut-off Lever	1
	141 2 8519 04800	Spring, Rewind Lever	1
	141 2 8519 34400	Spring, Stop Lever	1
	141 2 8519 38700	Spring, Head Lever	1
	141 2 8519 58500	Spring, Azimuth	1
	141 2 8519 75800	Spring, Reel	1
	141 2 8519 76300	Spring, Plunger	1
	141 2 8519 78800	Spring, Eject	1
	141 2 8519 80400	Spring, Earth	1
	141 2 8519 89800	Spring, Reel	1
	141 2 8519 90900	Spring, Idler	1
	141 2 8519 96000	Spring, Brake	1
	141 2 8519 96100	Spring, Pinch Roller	1
	141 2 8519 96200	Spring, Arm Idler	1
	141 2 8519 99600	Spring, Interlock	1
	141 2 8519 99700	Spring, Plunger	1
	141 2 8539 31300	Spring, Cassette	1
	141 2 8539 33100	Spring, Cassette Holder	2
	141 2 8539 40800	Spring, Dumper	1
	101 3 1202 00411	Screw, Flat Hd. +M2.0x4	4
	101 3 1202 60411	Screw, Flat Hd. +M2.6x4	3
	101 3 1202 60511	Screw, Flat Hd. +M2.6x5	2
	101 3 1302 00311	Screw, Pan Hd. +M2.0x3	2
	101 3 1302 00511	Screw, Pan Hd. +M2.0x5	2
	101 3 1302 60311	Screw, Pan Hd. +M2.6x3	1
	101 3 1302 60411	Screw, Pan Hd. +M2.6x4	1
	101 3 1302 60511	Screw, Pan Hd. +M2.6x5	3
	101 3 1303 01011	Screw, Pan Hd. +M3.0x10	2
	101 3 1303 01211	Screw, Pan Hd. +M3.0x12	1
	101 3 1303 01411	Screw, Pan Hd. +M3.0x14	1
	101 3 1303 01611	Screw, Pan Hd. +M3.0x16	2
	101 3 1702 00411	Screw, Bind Hd. +M2.0x4	1
	101 3 1702 00611	Screw, Bind Hd. +M2.0x6	2
	101 3 1702 61011	Screw, Bind Hd. +M2.6x10	2
	101 3 1703 00511	Screw, Bind Hd. +M3.0x5	8
	101 3 1802 00611	Screw, Truss Hd. +M2.0x6	2
	101 3 1802 60611	Screw, Truss Hd. +M2.6x6	3
	101 3 2502 00611	Screw, Cylinder Hd. -M2.0x6	1
	102 3 1703 01218	Screw, Bind Hd. Tapping-1 +M3.0x12	2
	103 3 1203 01018	Screw, Flat Hd. Tapping-2 +M3.0x10	4
	103 3 1303 00511	Screw, Pan Hd. Tapping-2 +M3.0x5	3
	103 3 1703 01211	Screw, Bind Hd. Tapping-2 +M3.0x12	2
	106 3 6204 00011	Hexagon Flange Nut-S M4.0	2
	110 3 1202 00023	Finished Washer M2.0	1
	110 3 9260 60025	Washer M2.6x6.0x0.2	2
	110 3 9410 60025	Washer M4.1x6.0x0.5	1
	112 3 1301 20040	E Ring M1.2	2
	112 3 1301 50040	E Ring M1.5	5
	112 3 1302 00040	E Ring M2.0	4
	112 3 1302 50040	E Ring M2.5	5
	112 3 1303 00040	E Ring M3.0	3
	112 3 1305 00040	E Ring M5.0	1
	131 3 1302 60511	Screw, Pan Hd. C SW +M2.6x5	2
	131 3 1302 60611	Screw, Pan Hd. C SW +M2.6x6	3
	131 3 1303 00611	Screw, Pan Hd. C SW +M3.0x6	9
	131 3 1304 01211	Screw, Pan Hd. C SW +M4.0x12	2
	135 3 1303 00611	Screw, Pan Hd. C PW +M3.0x6	1
	143 3 1302 60611	Screw, Pan Hd. Tapping-B +M2.6x6	5
MECHANISM			
	143 3 1303 01011	Screw, Pan Hd. Tapping-B +M3.0x10	2
	143 3 1903 00811	Screw, Brazier Hd. Tapping-B +M3.0x8	3
	143 3 1903 01011	Screw, Brazier Hd. Tapping-B +M3.0x10	8
	143 3 1903 01211	Screw, Brazier Hd. Tapping-B +M3.0x12	2
	143 3 1903 01411	Screw, Brazier Hd. Tapping-B +M3.0x14	9
	201 2 5010 01002	Mica Sheet 313B (for Q21)	1
CN2	4 2359 75052	Connector 4P Assy	1
CN3	4 2359 75051	Connector 3P Assy	1
CN4	4 2359 75053	Connector 12P Assy	1

NOTES:
1. **Parts order must contain Model Number, Part Number and Description.**
2. **Ordering quantity of screws and resistors must be multiple of 10 pcs.**

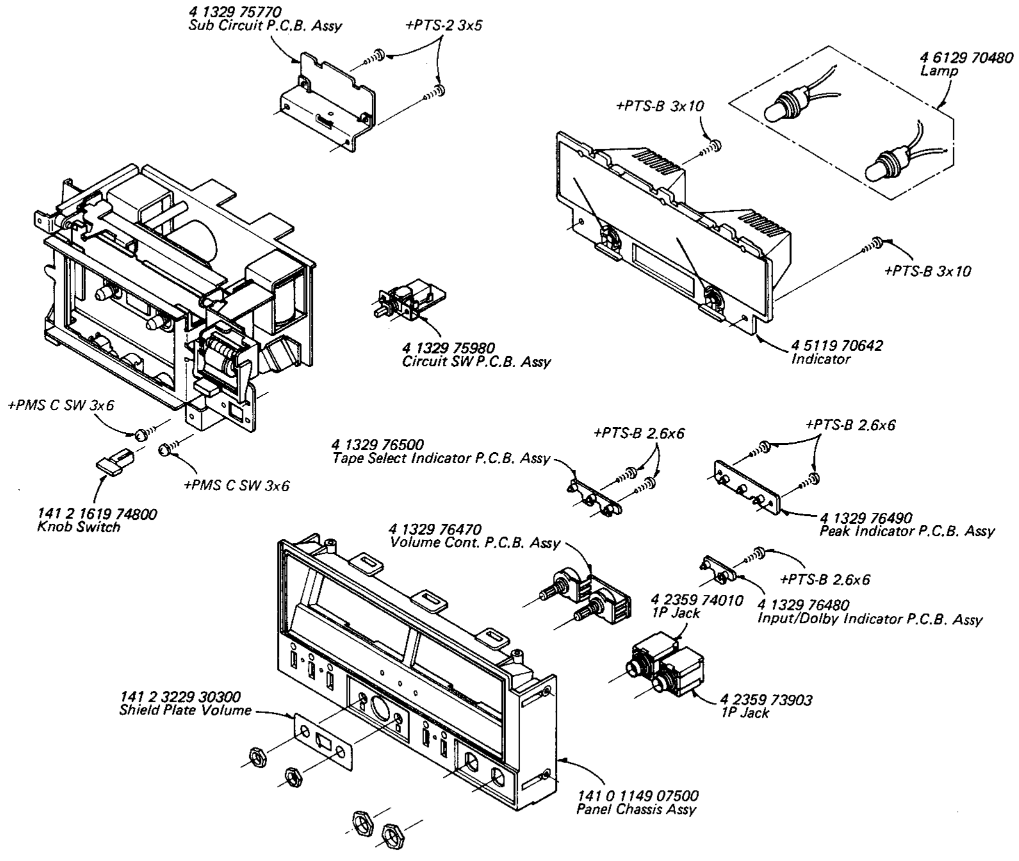
EXPLODED VIEW

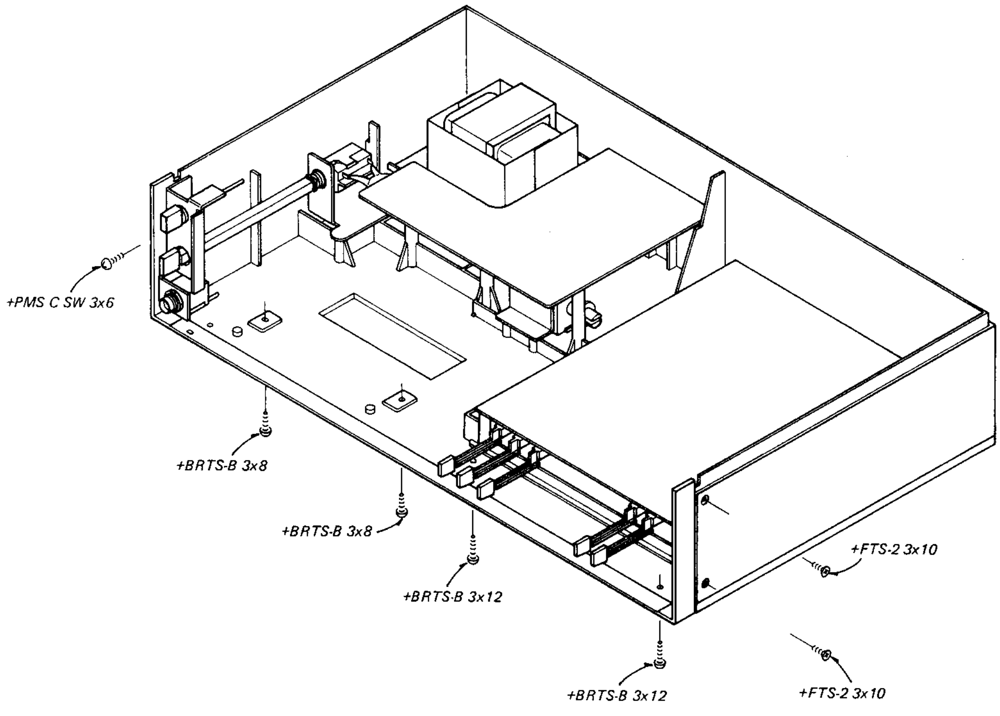
(Cabinet)


+BTS-1 3x12
141 2 1119 64100
Cover
+BTS-1 3x12
141 0 1249 17200
Lid Cassette Assy (Silver)
141 0 1249 17700
Lid Cassette Assy (Black)
+BTS-1 3x12
141 2 1419 09284
Rating Plate
141 2 4219 22400
Dress Screw
141 2 1319 19400
Clear Lid Cassette
141 2 4219 22400
Dress Screw
+BTS-2 3x12
+BRTS-B 3x8
+PTS-B 3x8
+PTS-B 2.6x6
+BTS-2
3x12
+BTS-1
3x12
+PTS-B
2.6x6
+BRTS-B 3x8
+PTS-B 3x8
+PTS-B 2.6x6
+BTS-1 3x12
+BRTS-B 3x8
141 0 1119 70002
Panel Front Assy (Silver)
141 0 1119 73200
Panel Front Assy (Black)
141 2 1639 37100
Knob Volume (Silver)
141 2 1639 37101
Knob Volume (Black)
+PTS-B 2.6x6
4 2319 74481
Function Switch Key Board Assy
+PTS-B 2.6x6
+PTS-B 2.6x6
141 2 2449 33400
Panel Sheet
141 0 1219 04701
Panel Button Assy (Silver)
141 0 1219 04702
Panel Button Assy (Black)
141 2 4469 34100
Cushion
141 2 4469 34200
Cushion
141 2 1219 15202
Panel (Silver)
141 2 1219 15204
Panel (Black)
+BRTS-B 3x8
+BRTS-B 3x8

EXPLODED VIEW (Continued)

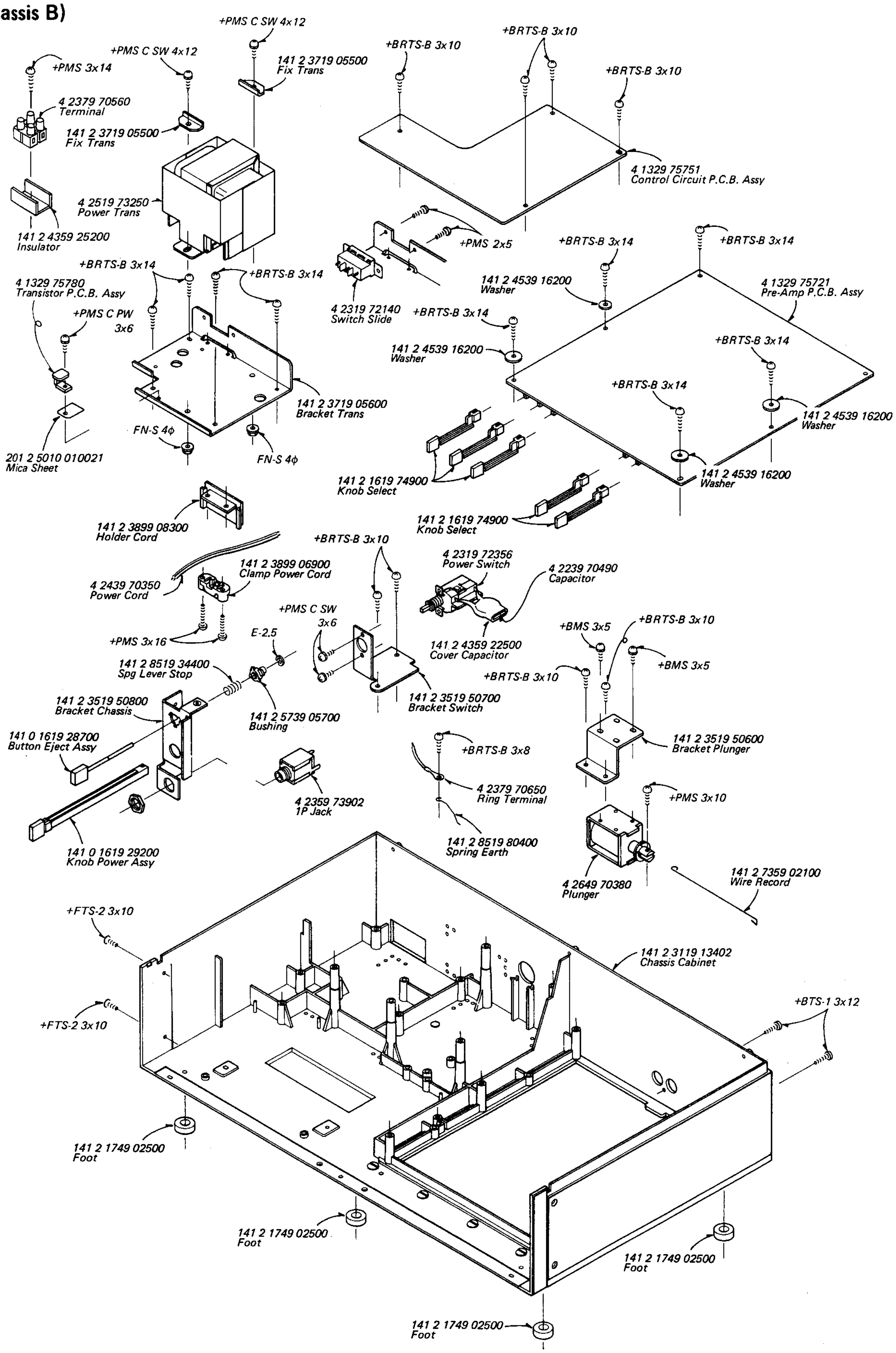
(Chassis A)


4 1329 75770
Sub Circuit P.C.B. Assy
+PTS-2 3x5
4 6129 70480
Lamp
+PTS-B 3x10
+PTS-B 3x10
4 1329 75980
Circuit SW P.C.B. Assy
4 5119 70642
Indicator
+PMS C SW 3x6
+PMS C SW 3x6
141 2 1619 74800
Knob Switch
4 1329 76500
Tape Select Indicator P.C.B. Assy
+PTS-B 2.6x6
+PTS-B 2.6x6
4 1329 76490
Peak Indicator P.C.B. Assy
4 1329 76470
Volume Cont. P.C.B. Assy
+PTS-B 2.6x6
4 2359 74010
1P Jack
4 1329 76480
Input/Dolby Indicator P.C.B. Assy
4 2359 73903
1P Jack
141 2 3229 30300
Shield Plate Volume
141 0 1149 07500
Panel Chassis Assy


+PMS C SW 3x6
+BRTS-B 3x8
+BRTS-B 3x8
+BRTS-B 3x12
+FTS-2 3x10
+BRTS-B 3x12
+FTS-2 3x10

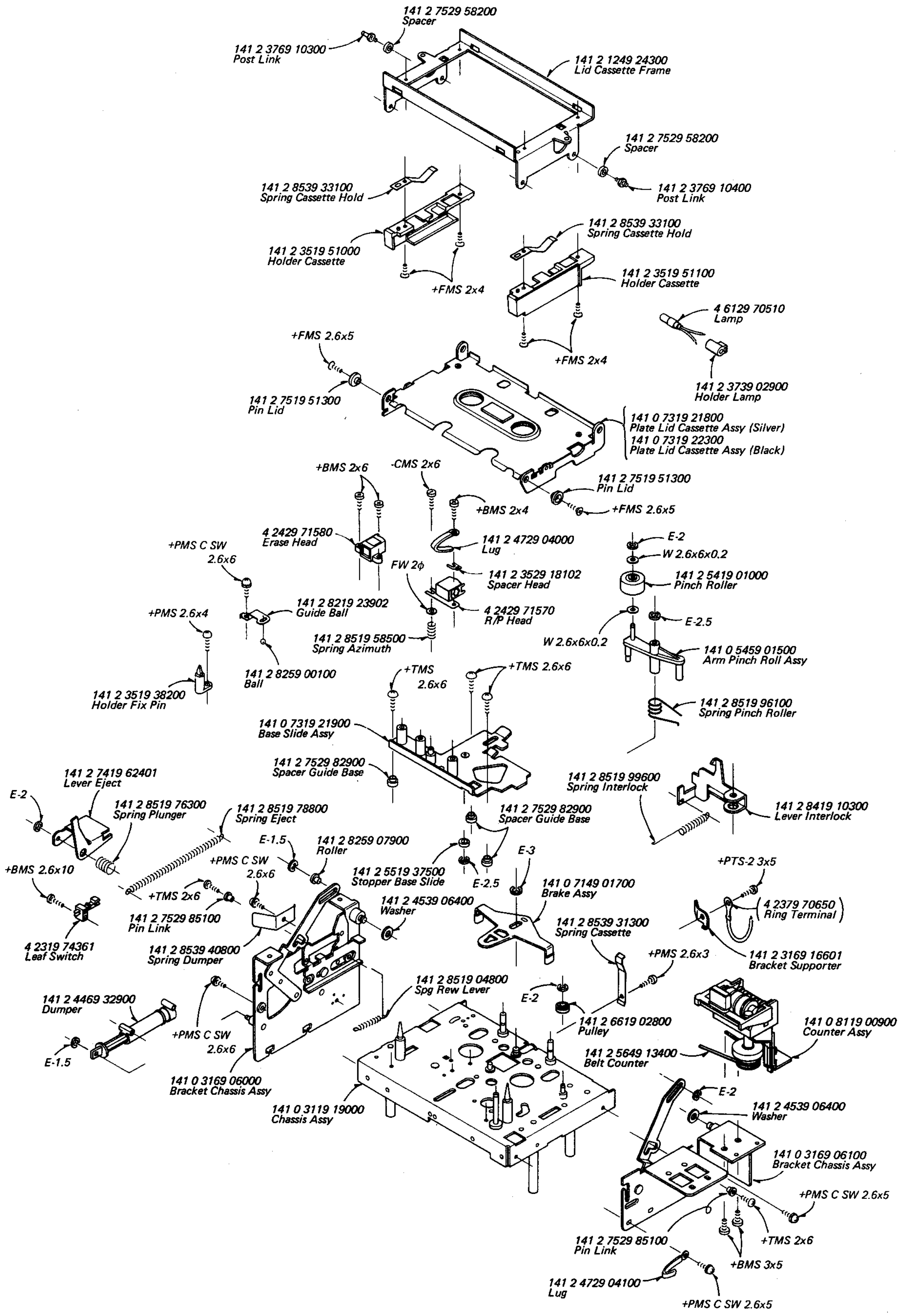
EXPLODED VIEW (Continued)

(Chassis B)


+PMS C SW 4x12
+PMS C SW 4x12
+PMS 3x14
141 2 3719 05500
Fix Trans
+BRTS-B 3x10
+BRTS-B 3x10
+BRTS-B 3x10
4 2379 70560
Terminal
141 2 3719 05500
Fix Trans
4 1329 75751
Control Circuit P.C.B. Assy
4 2519 73250
Power Trans
141 2 4359 25200
Insulator
+PMS 2x5
+BRTS-B 3x14
+BRTS-B 3x14
+BRTS-B 3x14
+BRTS-B 3x14
4 1329 75780
Transistor P.C.B. Assy
+PMS C PW 3x6
141 2 4539 16200
Washer
4 1329 75721
Pre-Amp P.C.B. Assy
4 2319 72140
Switch Slide
+BRTS-B 3x14
141 2 4539 16200
Washer
+BRTS-B 3x14
+BRTS-B 3x14
141 2 3719 05600
Bracket Trans
141 2 4539 16200
Washer
FN-S 4ϕ
FN-S 4ϕ
201 2 5010 010021
Mica Sheet
141 2 1619 74900
Knob Select
141 2 4539 16200
Washer
141 2 3899 08300
Holder Cord
141 2 1619 74900
Knob Select
+BRTS-B 3x10
4 2319 72356
Power Switch
141 2 3899 06900
Clamp Power Cord
4 2239 70490
Capacitor
4 2439 70350
Power Cord
+PMS C SW 3x6
E-2.5
+PMS 3x16
141 2 4359 22500
Cover Capacitor
+BMS 3x5
+BRTS-B 3x10
+BMS 3x5
+BRTS-B 3x10
141 2 8519 34400
Spg Lever Stop
141 2 3519 50800
Bracket Chassis
141 2 3519 50700
Bracket Switch
141 2 5739 05700
Bushing
141 0 1619 28700
Button Eject Assy
+BRTS-B 3x8
141 2 3519 50600
Bracket Plunger
4 2379 70650
Ring Terminal
+PMS 3x10
4 2359 73902
1P Jack
141 0 1619 29200
Knob Power Assy
141 2 8519 80400
Spring Earth
141 2 7359 02100
Wire Record
4 2649 70380
Plunger
+FTS-2 3x10
141 2 3119 13402
Chassis Cabinet
+BTS-1 3x12
+FTS-2 3x10
141 2 1749 02500
Foot
141 2 1749 02500
Foot
141 2 1749 02500
Foot
141 2 1749 02500
Foot

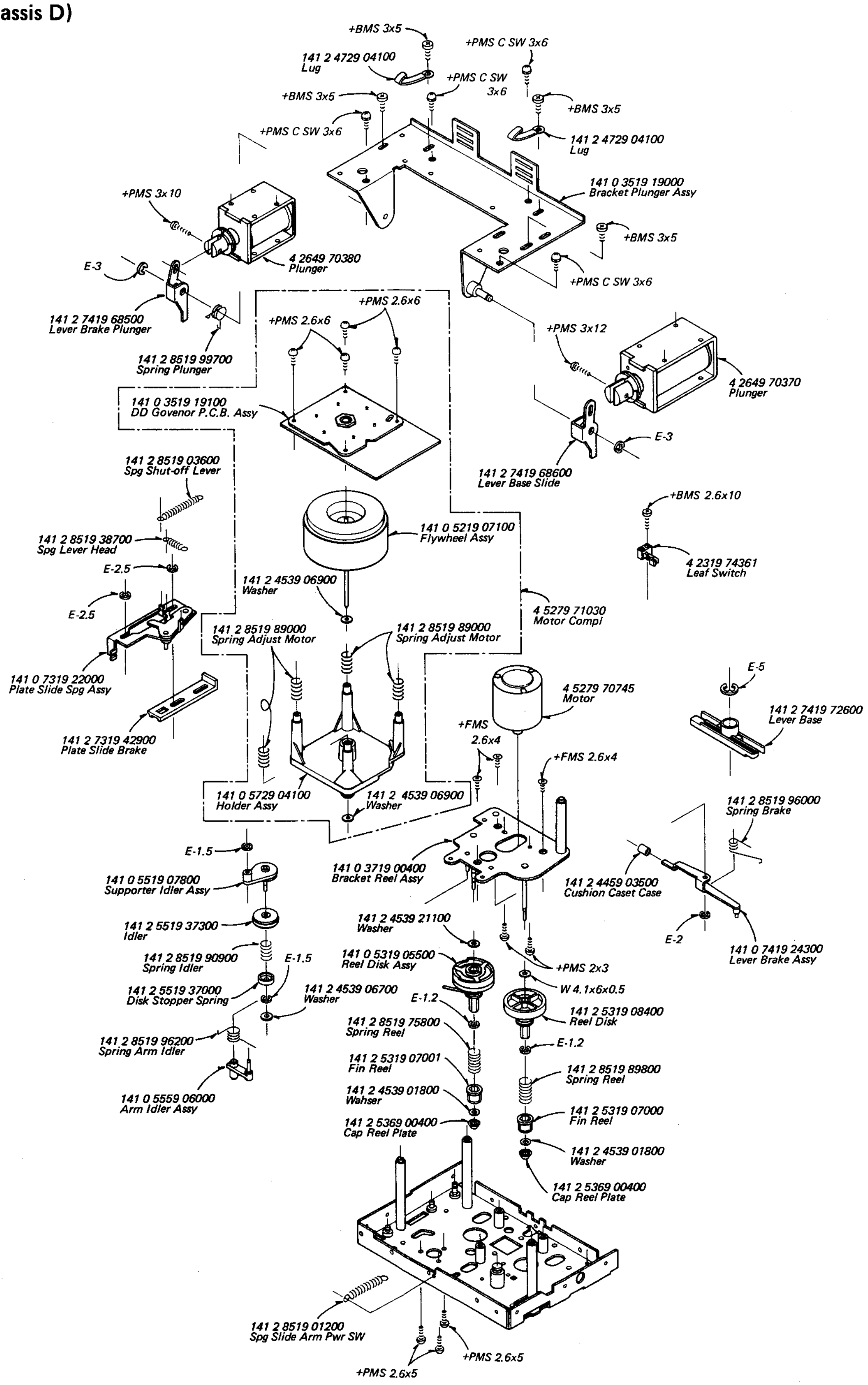
EXPLODED VIEW (Continued)

(Chassis C)


141 2 7529 58200 Spacer
141 2 3769 10300 Post Link
141 2 1249 24300 Lid Cassette Frame
141 2 7529 58200 Spacer
141 2 3769 10400 Post Link
141 2 8539 33100 Spring Cassette Hold
141 2 3519 51000 Holder Cassette
+FMS 2x4
141 2 8539 33100 Spring Cassette Hold
141 2 3519 51100 Holder Cassette
4 6129 70510 Lamp
+FMS 2.6x5
+FMS 2x4
141 2 7519 51300 Pin Lid
141 2 3739 02900 Holder Lamp
141 0 7319 21800 Plate Lid Cassette Assy (Silver)
141 0 7319 22300 Plate Lid Cassette Assy (Black)
+BMS 2x6
-CMS 2x6
141 2 7519 51300 Pin Lid
+FMS 2.6x5
+BMS 2x4
4 2429 71580 Erase Head
141 2 4729 04000 Lug
+PMS C SW 2.6x6
FW 2ϕ
141 2 3529 18102 Spacer Head
E-2
W 2.6x6x0.2
141 2 5419 01000 Pinch Roller
+PMS 2.6x4
141 2 8219 23902 Guide Ball
4 2429 71570 R/P Head
E-2.5
141 2 8519 58500 Spring Azimuth
W 2.6x6x0.2
141 0 5459 01500 Arm Pinch Roll Assy
141 2 8259 00100 Ball
+TMS 2.6x6
+TMS 2.6x6
141 2 3519 38200 Holder Fix Pin
141 2 8519 96100 Spring Pinch Roller
141 0 7319 21900 Base Slide Assy
141 2 7529 82900 Spacer Guide Base
141 2 7419 62401 Lever Eject
141 2 8519 99600 Spring Interlock
E-2
141 2 8519 76300 Spring Plunger
141 2 8519 78800 Spring Eject
141 2 7529 82900 Spacer Guide Base
141 2 8419 10300 Lever Interlock
E-1.5
141 2 8259 07900 Roller
+BMS 2.6x10
+PMS C SW 2.6x6
E-3
+TMS 2x6
141 2 5519 37500 Stopper Base Slide
E-2.5
141 0 7149 01700 Brake Assy
+PTS-2 3x5
141 2 7529 85100 Pin Link
141 2 4539 06400 Washer
4 2379 70650 Ring Terminal
4 2319 74361 Leaf Switch
141 2 8539 40800 Spring Dumper
141 2 8539 31300 Spring Cassette
+PMS 2.6x3
141 2 3169 16601 Bracket Supporter
141 2 8519 04800 Spg Rew Lever
141 2 4469 32900 Dumper
E-2
+PMS C SW 2.6x6
141 2 6619 02800 Pulley
141 0 8119 00900 Counter Assy
E-1.5
141 2 5649 13400 Belt Counter
141 0 3169 06000 Bracket Chassis Assy
E-2
141 0 3119 19000 Chassis Assy
141 2 4539 06400 Washer
141 0 3169 06100 Bracket Chassis Assy
+PMS C SW 2.6x5
+TMS 2x6
141 2 7529 85100 Pin Link
+BMS 3x5
141 2 4729 04100 Lug
+PMS C SW 2.6x5

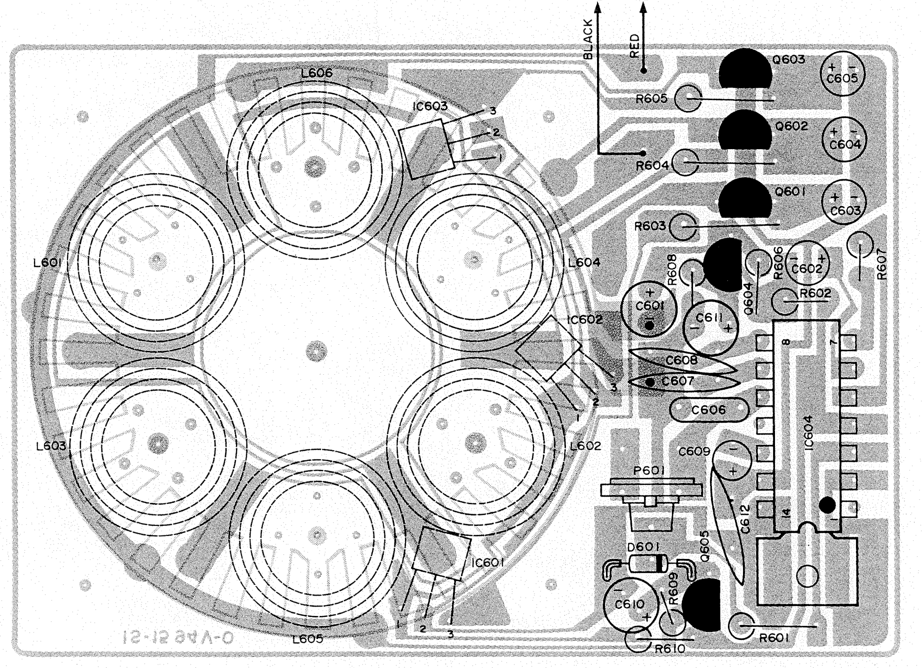
EXPLODED VIEW (Continued)

(Chassis D)


+BMS 3x5
+PMS C SW 3x6
141 2 4729 04100 Lug
+PMS C SW 3x6
+BMS 3x5
+BMS 3x5
+PMS C SW 3x6
141 2 4729 04100 Lug
141 0 3519 19000 Bracket Plunger Assy
+PMS 3x10
+BMS 3x5
4 2649 70380 Plunger
E-3
+PMS C SW 3x6
+PMS 2.6x6
+PMS 2.6x6
141 2 7419 68500 Lever Brake Plunger
+PMS 3x12
141 2 8519 99700 Spring Plunger
4 2649 70370 Plunger
141 0 3519 19100 DD Govenor P.C.B. Assy
E-3
141 2 7419 68600 Lever Base Slide
141 2 8519 03600 Spg Shut-off Lever
+BMS 2.6x10
141 0 5219 07100 Flywheel Assy
141 2 8519 38700 Spg Lever Head
4 2319 74361 Leaf Switch
E-2.5
141 2 4539 06900 Washer
E-2.5
4 5279 71030 Motor Compl
141 2 8519 89000 Spring Adjust Motor
141 2 8519 89000 Spring Adjust Motor
E-5
141 0 7319 22000 Plate Slide Spg Assy
4 5279 70745 Motor
141 2 7419 72600 Lever Base
+FMS 2.6x4
141 2 7319 42900 Plate Slide Brake
+FMS 2.6x4
141 0 5729 04100 Holder Assy
141 2 4539 06900 Washer
141 2 8519 96000 Spring Brake
E-1.5
141 0 3719 00400 Bracket Reel Assy
141 0 5519 07800 Supporter Idler Assy
141 2 4459 03500 Cushion Caset Case
141 2 5519 37300 Idler
141 2 4539 21100 Washer
E-2
141 0 7419 24300 Lever Brake Assy
141 2 8519 90900 Spring Idler
E-1.5
141 0 5319 05500 Reel Disk Assy
+PMS 2x3
141 2 5519 37000 Disk Stopper Spring
141 2 4539 06700 Washer
W 4.1x6x0.5
E-1.2
141 2 5319 08400 Reel Disk
141 2 8519 96200 Spring Arm Idler
141 2 8519 75800 Spring Reel
E-1.2
141 2 5319 07001 Fin Reel
141 2 8519 89800 Spring Reel
141 0 5559 06000 Arm Idler Assy
141 2 4539 01800 Wahser
141 2 5319 07000 Fin Reel
141 2 5369 00400 Cap Reel Plate
141 2 4539 01800 Washer
141 2 5369 00400 Cap Reel Plate
141 2 8519 01200 Spg Slide Arm Pwr SW
+PMS 2.6x5
+PMS 2.6x5

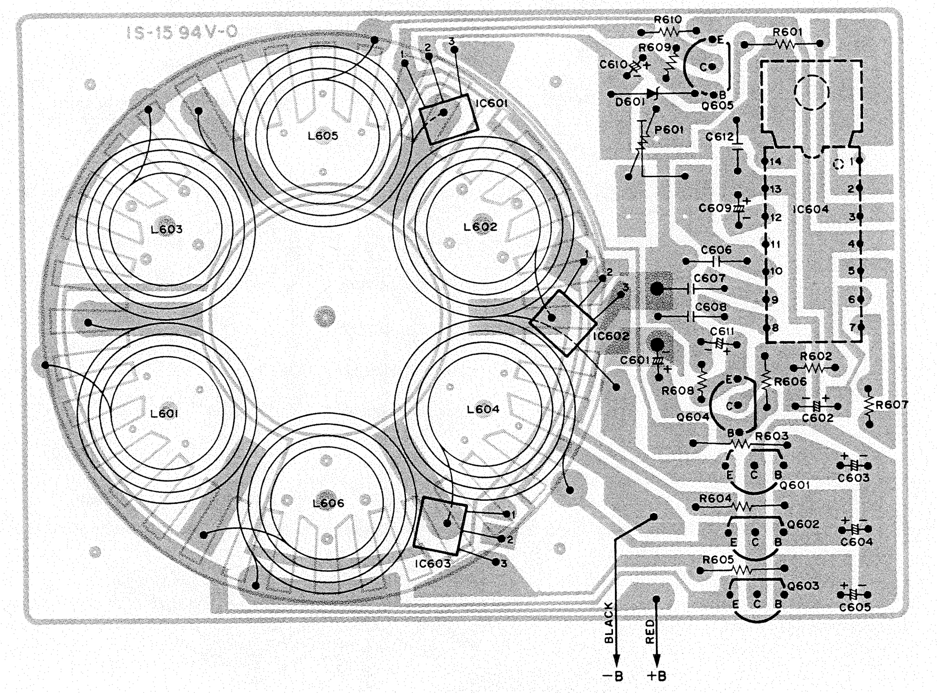
D.D. MOTOR GOVERNOR P.C.BOARD

(Top View)



−B
+B
BLACK
RED
Q603
C605
R605
Q602
C604
R604
Q601
C603
R603
Q604
R606
C602
R602
R607
R608
C601
C611
IC603
IC602
IC604
C608
C607
C606
C609
P601
C612
D601
Q605
R609
C610
R610
R601
IC601
L601
L602
L603
L604
L605
L606
1S-15 94V-0

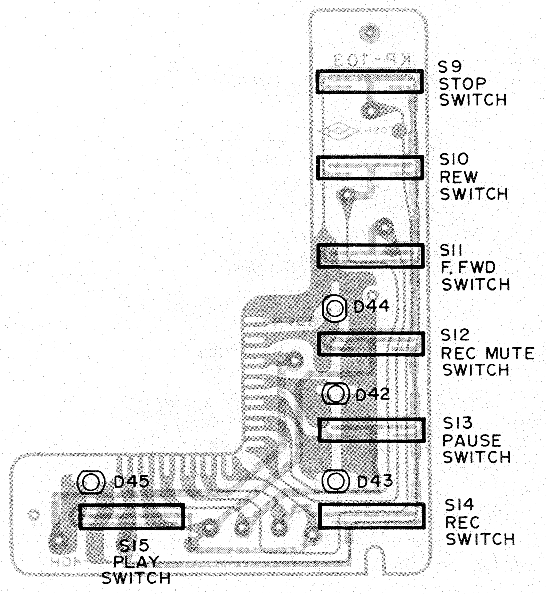
(Bottom View)



1S-15 94V-0
R610
R601
C610
R609
D601
Q605
P601
C612
IC601
IC602
IC603
IC604
C609
C606
C607
C608
C611
C601
R602
R608
R606
C602
R607
Q604
R603
Q601
C603
R604
Q602
C604
R605
Q603
C605
L601
L602
L603
L604
L605
L606
BLACK
RED
−B
+B

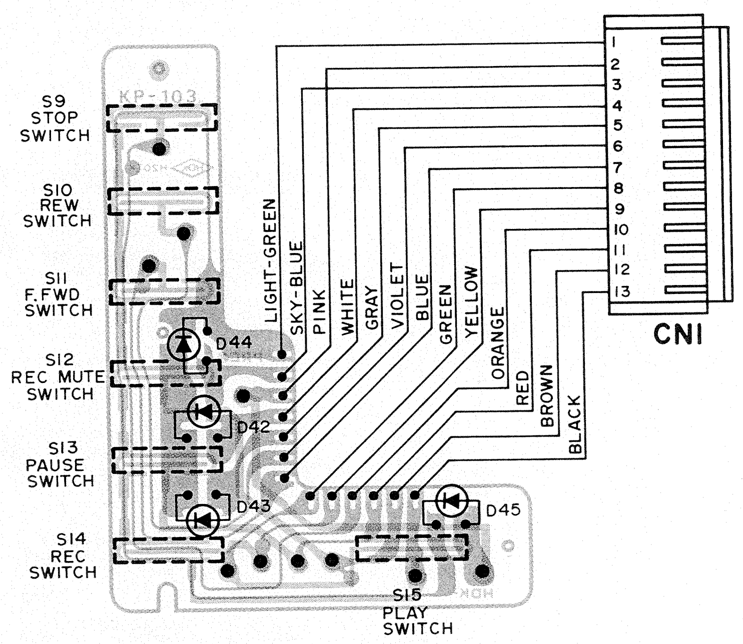
FUNCTION SWITCH P.C.BOARD

(Top View)



KP-103
S9 STOP SWITCH
S10 REW SWITCH
S11 F.FWD SWITCH
S12 REC MUTE SWITCH
S13 PAUSE SWITCH
S14 REC SWITCH
S15 PLAY SWITCH
D44
D42
D43
D45
HDK

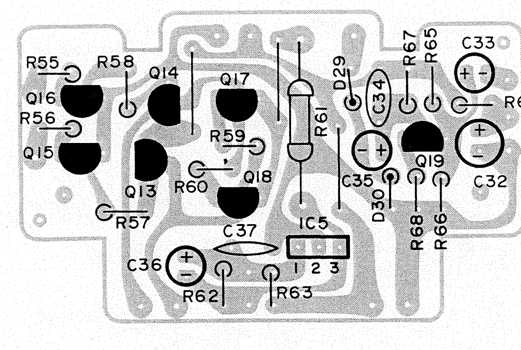
(Bottom View)



KP-103
S9 STOP SWITCH
S10 REW SWITCH
S11 F.FWD SWITCH
S12 REC MUTE SWITCH
S13 PAUSE SWITCH
S14 REC SWITCH
S15 PLAY SWITCH
D44
D42
D43
D45
LIGHT-GREEN
SKY-BLUE
PINK
WHITE
GRAY
VIOLET
BLUE
GREEN
YELLOW
ORANGE
RED
BROWN
BLACK
1
2
3
4
5
6
7
8
9
10
11
12
13
CN1
HDK

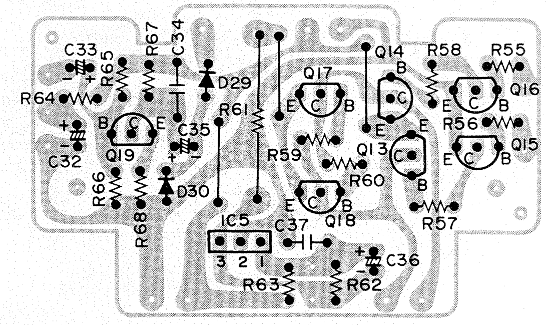
SUB CONTROL P.C.BOARD

(Top View)



R55
R58
Q14
Q17
D29
C34
R67
R65
C33
R64
Q16
R56
Q15
R59
R61
Q19
C35
C32
Q13
R60
Q18
D30
R68
R66
R57
C37
IC5
C36
R62
R63
1 2 3

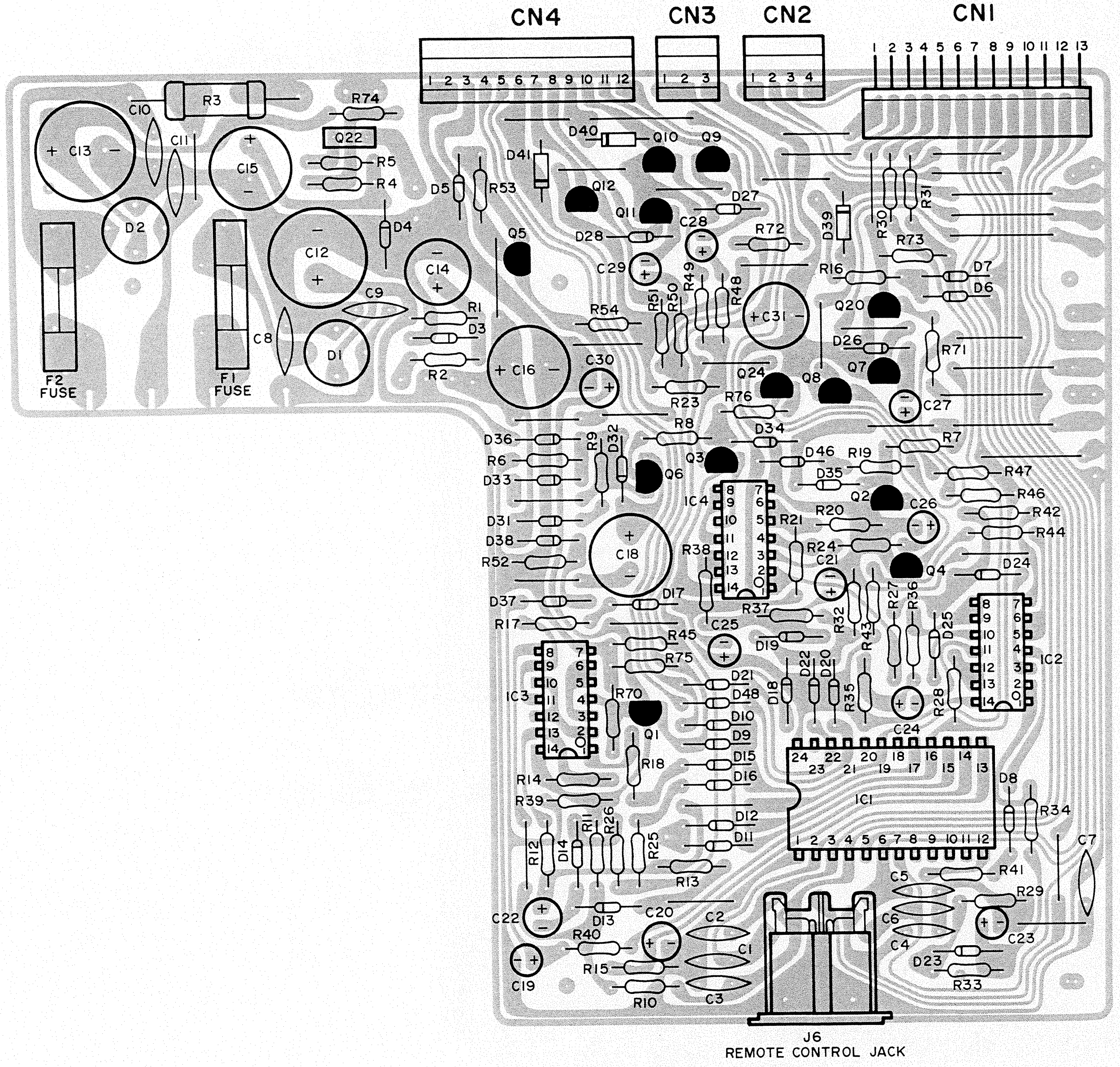
(Bottom View)



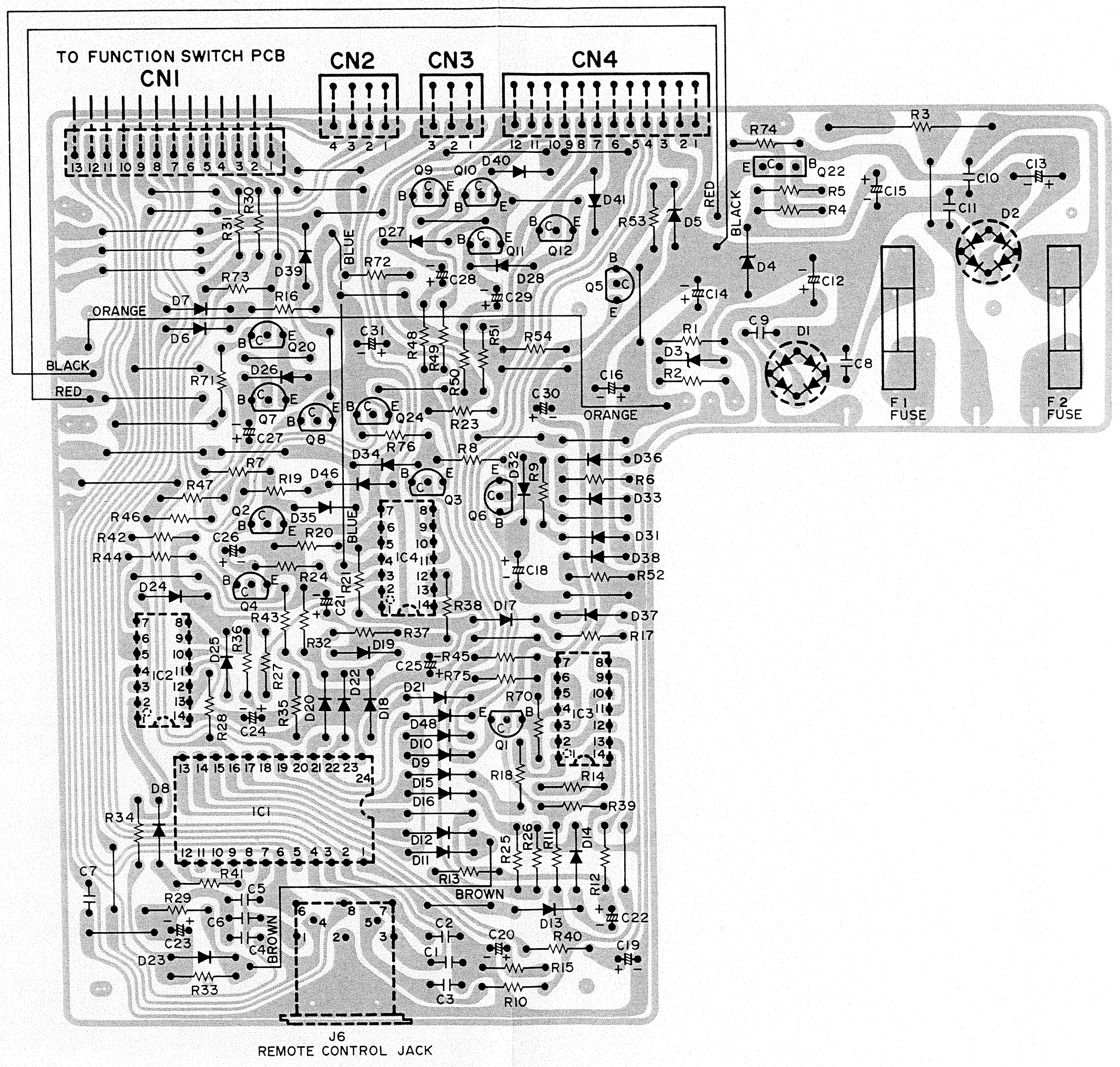
C33
R65
R67
C34
D29
Q17
Q14
R58
R55
R64
R61
Q16
C32
Q19
C35
R59
Q13
R56
Q15
R66
R68
D30
R60
Q18
R57
IC5
C37
C36
3 2 1
R63
R62
E C B

CONTROL P.C.BOARD

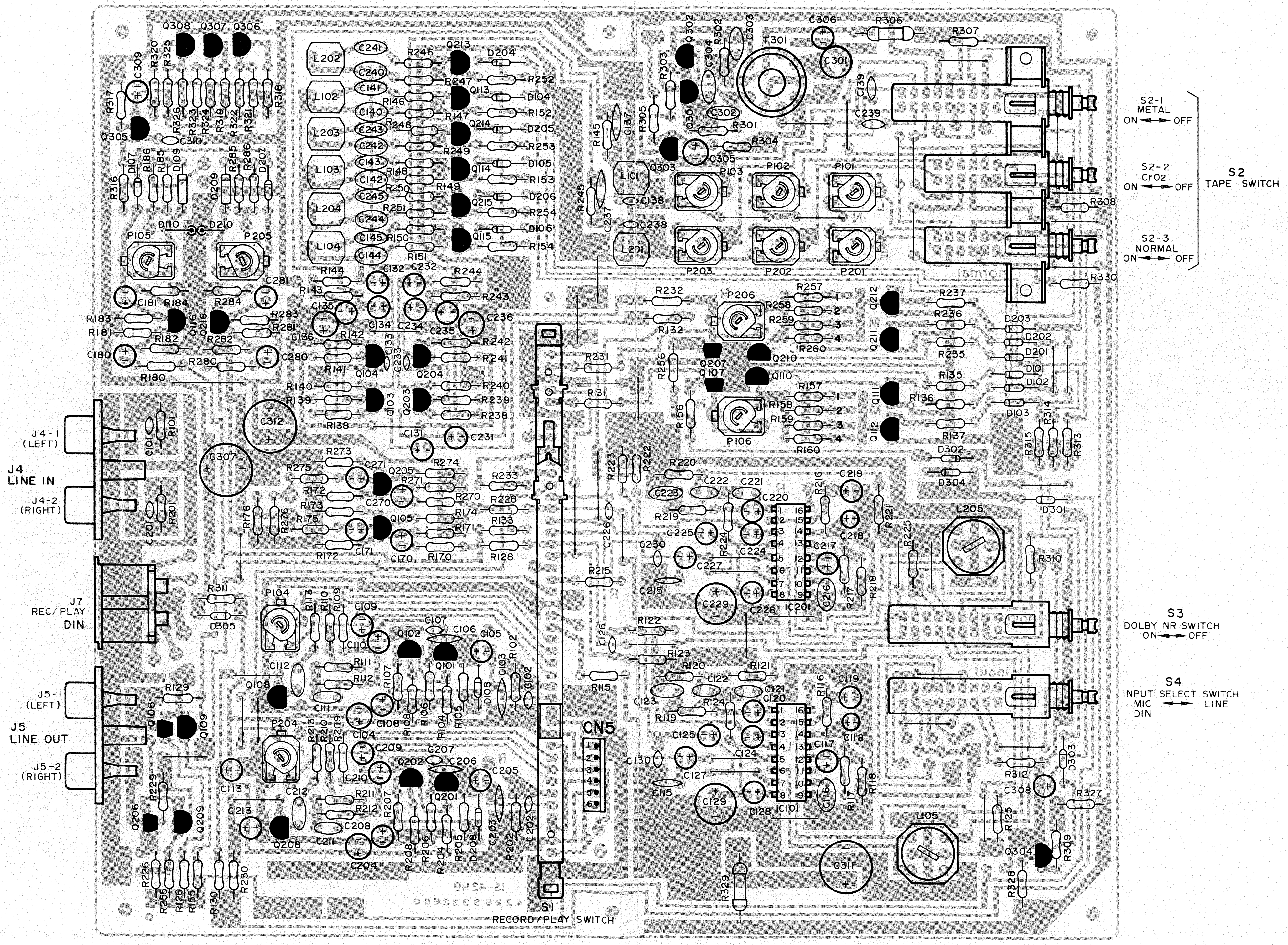
(Top View)


CN4
CN3
CN2
CN1
1 2 3 4 5 6 7 8 9 10 11 12 13
C13
C10
C11
R3
R74
Q22
R5
R4
C15
D2
C12
D4
C14
D5
R53
D41
Q12
Q11
D40
Q10
Q9
D27
C28
D28
Q5
C29
R72
D39
R30
R31
R73
R16
D7
D6
C9
R1
D3
R2
C8
D1
F2 FUSE
F1 FUSE
C16
C30
R54
R51
R50
R49
R48
C31
Q20
D26
Q24
Q8
Q7
R71
R23
R76
C27
R8
D34
D36
R6
D33
D31
D38
R52
D37
R17
R9
D32
Q3
Q6
IC4
R21
R20
R24
C21
D46
R19
D35
Q2
C26
R7
R47
R46
R42
R44
C18
R38
D17
C25
R37
R32
R43
R36
R27
D25
Q4
D24
IC2
IC3
R45
R75
R70
Q1
D21
D48
D10
D9
D15
D16
D12
D11
D19
D18
D22
D20
R35
R28
C24
R18
R14
R39
R12
D14
R11
R26
R25
R13
IC1
D8
R34
C7
R41
R29
C5
C6
C4
D23
R33
C23
C22
D13
C20
R40
R15
R10
C2
C1
C3
C19
J6
REMOTE CONTROL JACK

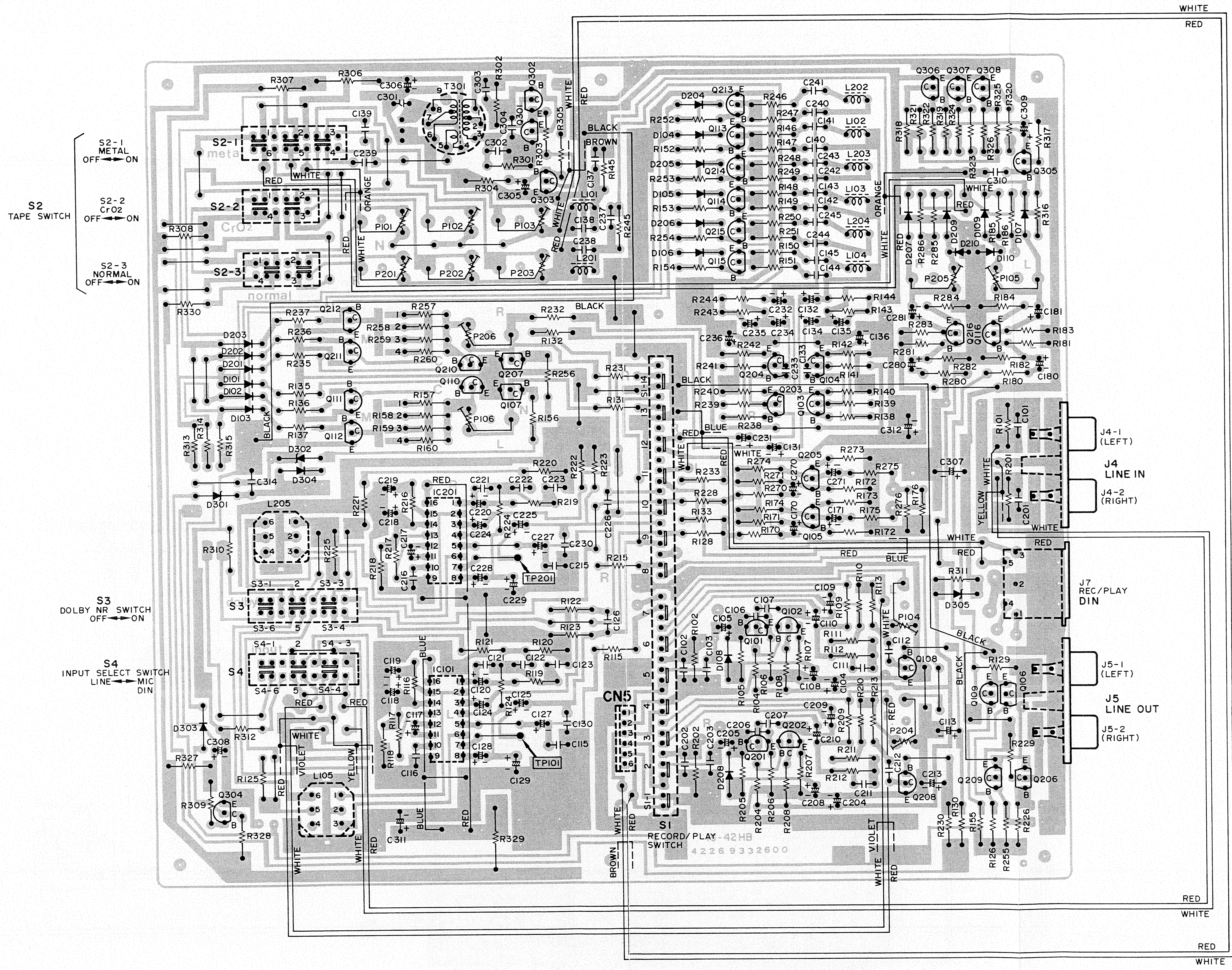
(Bottom View)


TO FUNCTION SWITCH PCB
CN1
CN2
CN3
CN4
13 12 11 10 9 8 7 6 5 4 3 2 1
4 3 2 1
3 2 1
12 11 10 9 8 7 6 5 4 3 2 1
R74
R3
Q22
R5
R4
C15
C10
C11
C13
D2
RED
BLACK
D5
R53
D4
C12
C14
Q5
Q9
Q10
D40
D41
Q11
Q12
D27
D28
C28
C29
R30
R31
D39
BLUE
R72
R73
R16
ORANGE
D7
D6
BLACK
RED
R71
Q20
D26
C31
R48
R49
R50
R51
R54
C16
C30
ORANGE
C9
D1
R1
D3
R2
C8
F1 FUSE
F2 FUSE
Q7
Q8
C27
Q24
R76
R23
R8
D34
D32
R9
Q3
Q6
D36
R6
D33
R7
R19
D46
R47
R46
R42
R44
Q2
D35
R20
C26
IC4
C18
D31
D38
R52
D24
Q4
R24
R21
R43
R38
D17
D37
R17
R37
R36
D25
IC2
R27
R32
D19
C25
R45
R75
R28
C24
R35
D20
D22
D18
D21
D48
D10
D9
D15
D16
D12
D11
R70
Q1
IC3
R18
R14
R39
IC1
D8
R34
C7
R41
R25
R26
R11
D14
R12
R13
BROWN
D13
R40
C22
C19
R29
C23
C6
C5
C4
BROWN
D23
R33
C2
C20
C1
C3
R15
R10
J6
REMOTE CONTROL JACK

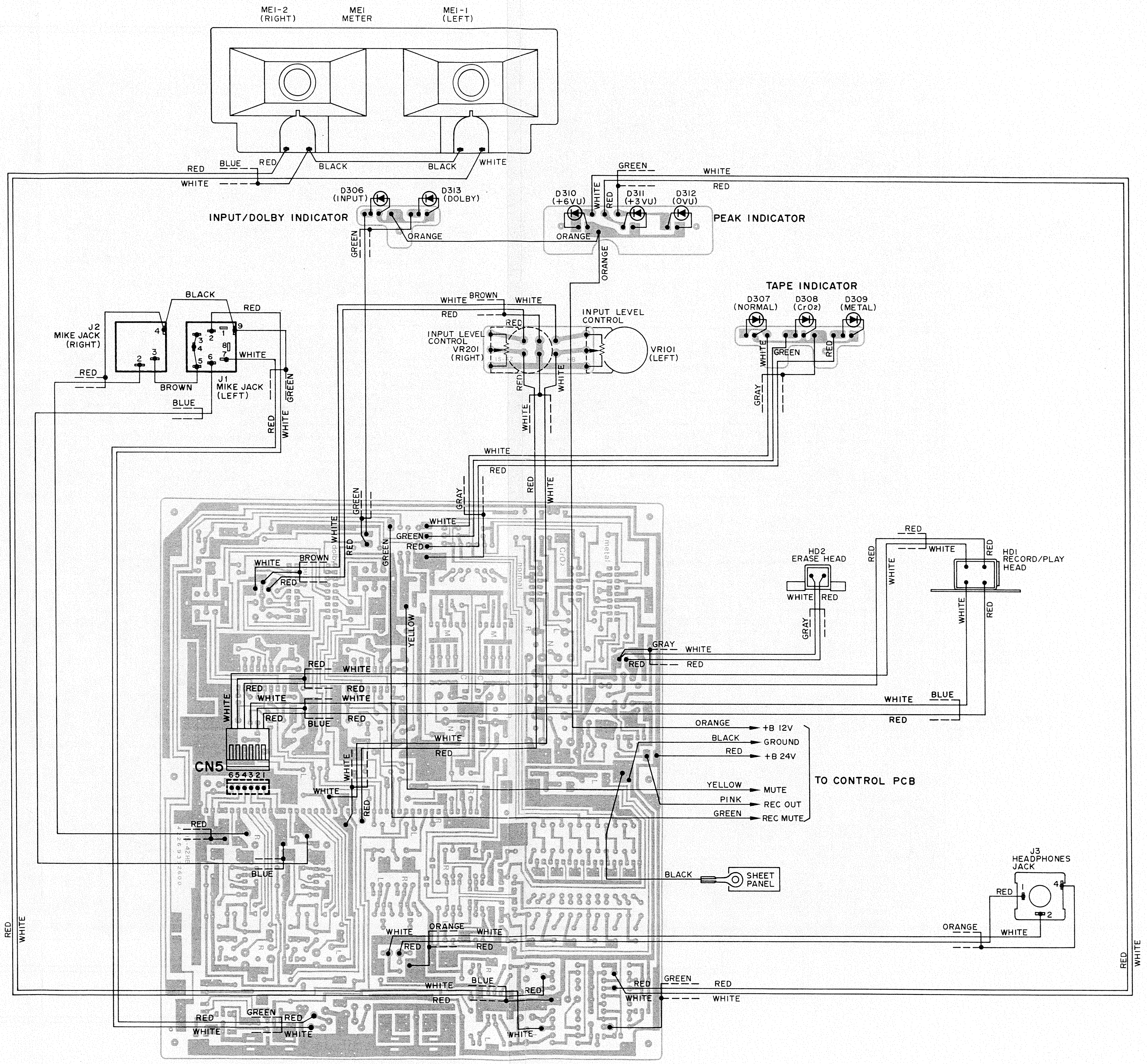
AMPLIFIER P.C.BOARD (Top View)


S2-1
METAL
ON ◄► OFF
S2-2
CrO2
ON ◄► OFF
S2-3
NORMAL
ON ◄► OFF
S2
TAPE SWITCH
S3
DOLBY NR SWITCH
ON ◄► OFF
S4
INPUT SELECT SWITCH
MIC DIN ◄► LINE
J4-1 (LEFT)
J4
LINE IN
J4-2 (RIGHT)
J7
REC/PLAY
DIN
J5-1 (LEFT)
J5
LINE OUT
J5-2 (RIGHT)
S1
RECORD/PLAY SWITCH
CN5
IC101
IC201
T301
L105
L205

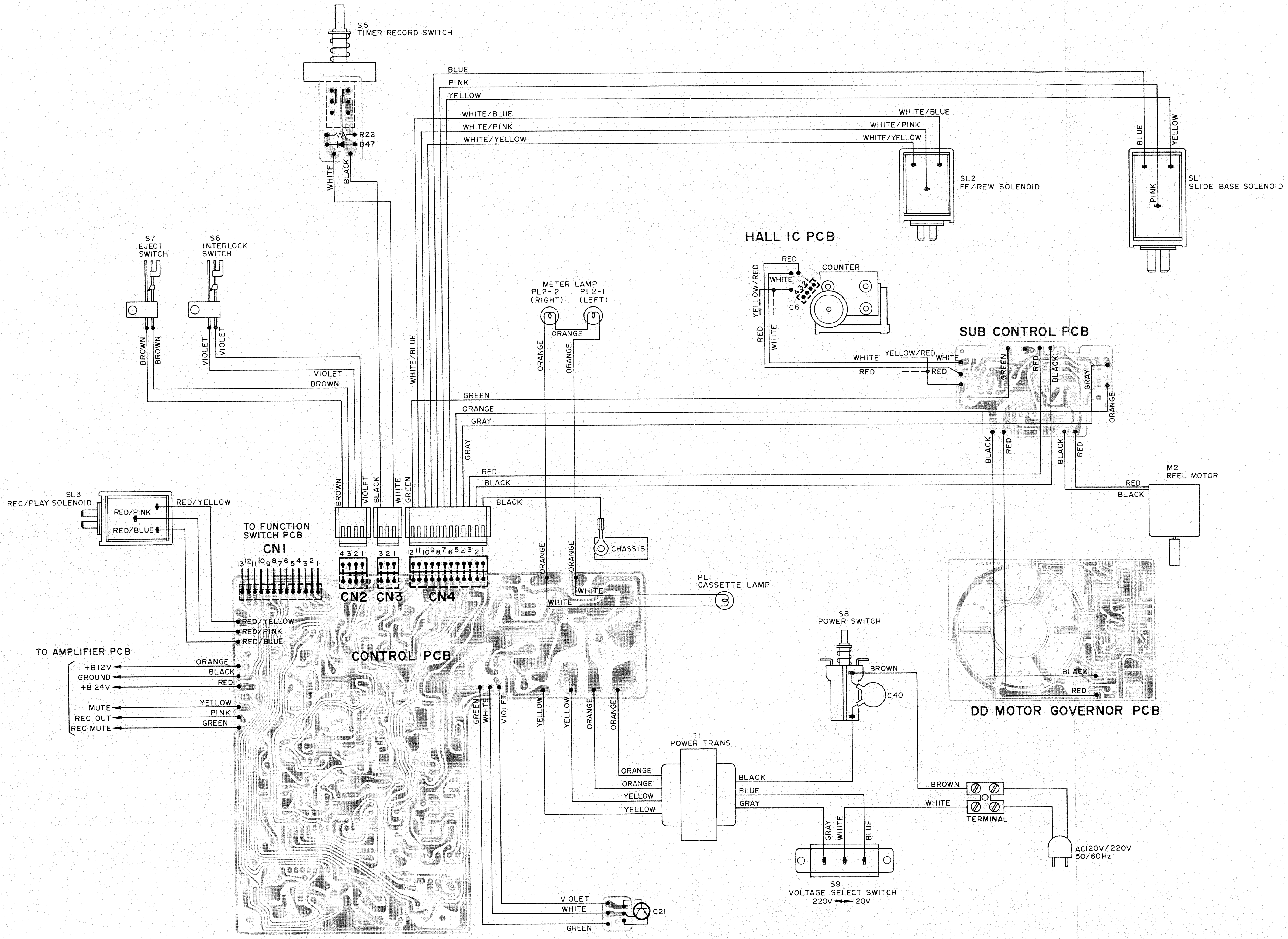
AMPLIFIER P.C.BOARD(Bottom View)


S2
TAPE SWITCH
S2-1
METAL
OFF ◄► ON
S2-2
CrO2
OFF ◄► ON
S2-3
NORMAL
OFF ◄► ON
S3
DOLBY NR SWITCH
OFF ◄► ON
S4
INPUT SELECT SWITCH
LINE ◄► MIC
DIN
J4-1
(LEFT)
J4
LINE IN
J4-2
(RIGHT)
J7
REC/PLAY
DIN
J5-1
(LEFT)
J5
LINE OUT
J5-2
(RIGHT)
CN5
S1
RECORD/PLAY
SWITCH
IC101
IC201
TP101
TP201
T301
WHITE
RED
BLACK
BROWN
ORANGE
BLUE
YELLOW
VIOLET

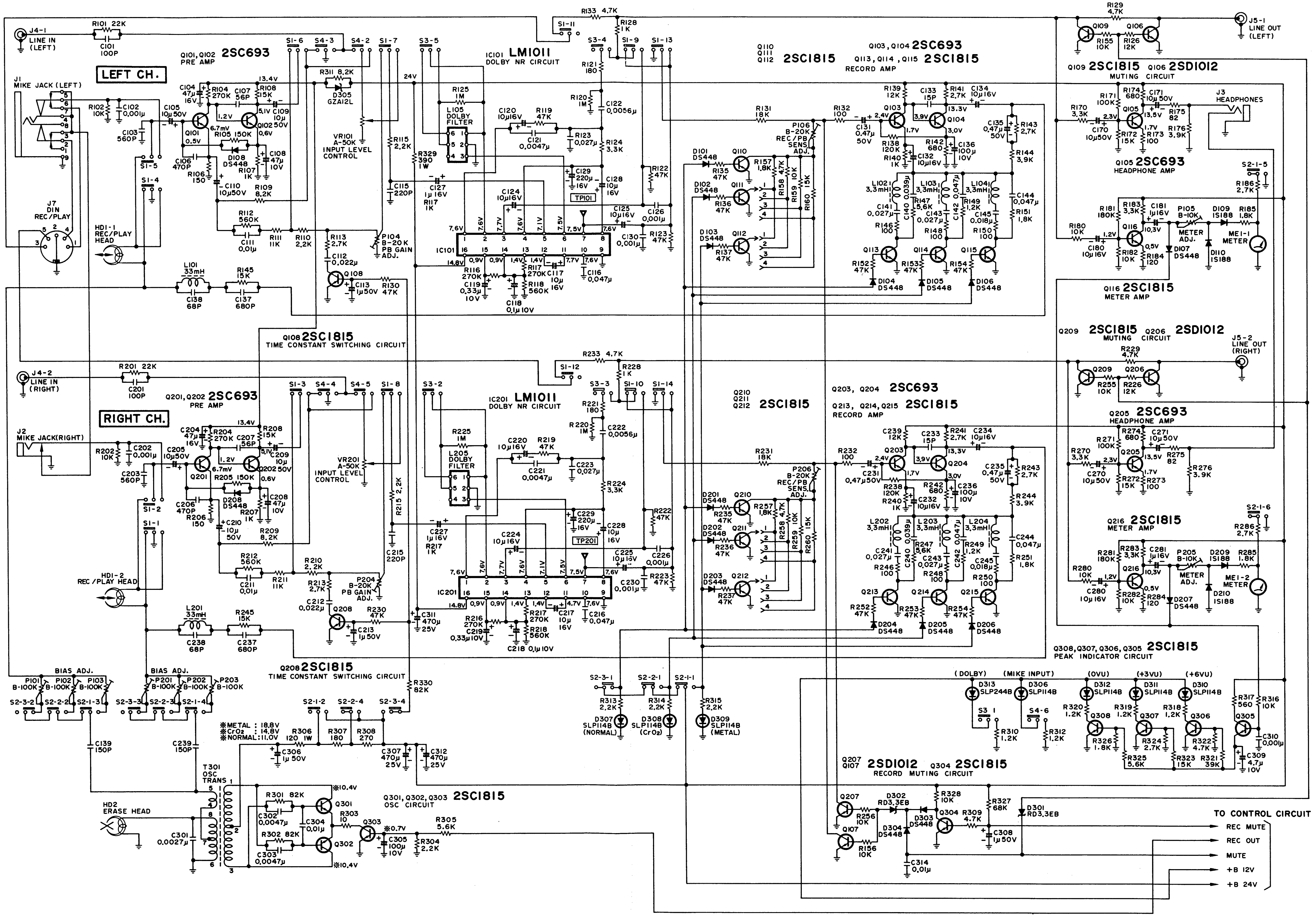
WIRING DIAGRAM(Amplifier Section)


MEI-2 (RIGHT)
MEI METER
MEI-1 (LEFT)
RED
BLUE
RED
BLACK
BLACK
WHITE
WHITE
D306 (INPUT)
D313 (DOLBY)
INPUT/DOLBY INDICATOR
GREEN
ORANGE
GREEN
WHITE
RED
D310 (+6VU)
D311 (+3VU)
D312 (0VU)
PEAK INDICATOR
ORANGE
ORANGE
BLACK
RED
J2 MIKE JACK (RIGHT)
RED
BROWN
WHITE
J1 MIKE JACK (LEFT)
BLUE
GREEN
RED
WHITE
WHITE
BROWN
WHITE
RED
INPUT LEVEL CONTROL VR201 (RIGHT)
INPUT LEVEL CONTROL
VR101 (LEFT)
RED
WHITE
TAPE INDICATOR
D307 (NORMAL)
D308 (CrO2)
D309 (METAL)
WHITE
GREEN
RED
GRAY
WHITE
RED
GRAY
RED
WHITE
GREEN
WHITE
GREEN
RED
WHITE
BROWN
RED
YELLOW
HD2 ERASE HEAD
WHITE
RED
GRAY
RED
WHITE
RED
HD1 RECORD/PLAY HEAD
WHITE
RED
GRAY
WHITE
RED
RED
RED
WHITE
RED
WHITE
WHITE
RED
WHITE
BLUE
RED
WHITE
BLUE
RED
CN5
654321
WHITE
RED
ORANGE
+B 12V
BLACK
GROUND
RED
+B 24V
TO CONTROL PCB
YELLOW
MUTE
PINK
REC OUT
GREEN
REC MUTE
WHITE
RED
RED
BLUE
BLACK
SHEET PANEL
J3 HEADPHONES JACK
RED
ORANGE
WHITE
WHITE
ORANGE
WHITE
RED
RED
WHITE
BLUE
RED
RED
WHITE
GREEN
RED
WHITE
WHITE
RED
GREEN
RED
WHITE
WHITE
WHITE
RED
WHITE
RED
WHITE

WIRING DIAGRAM(Control Section)

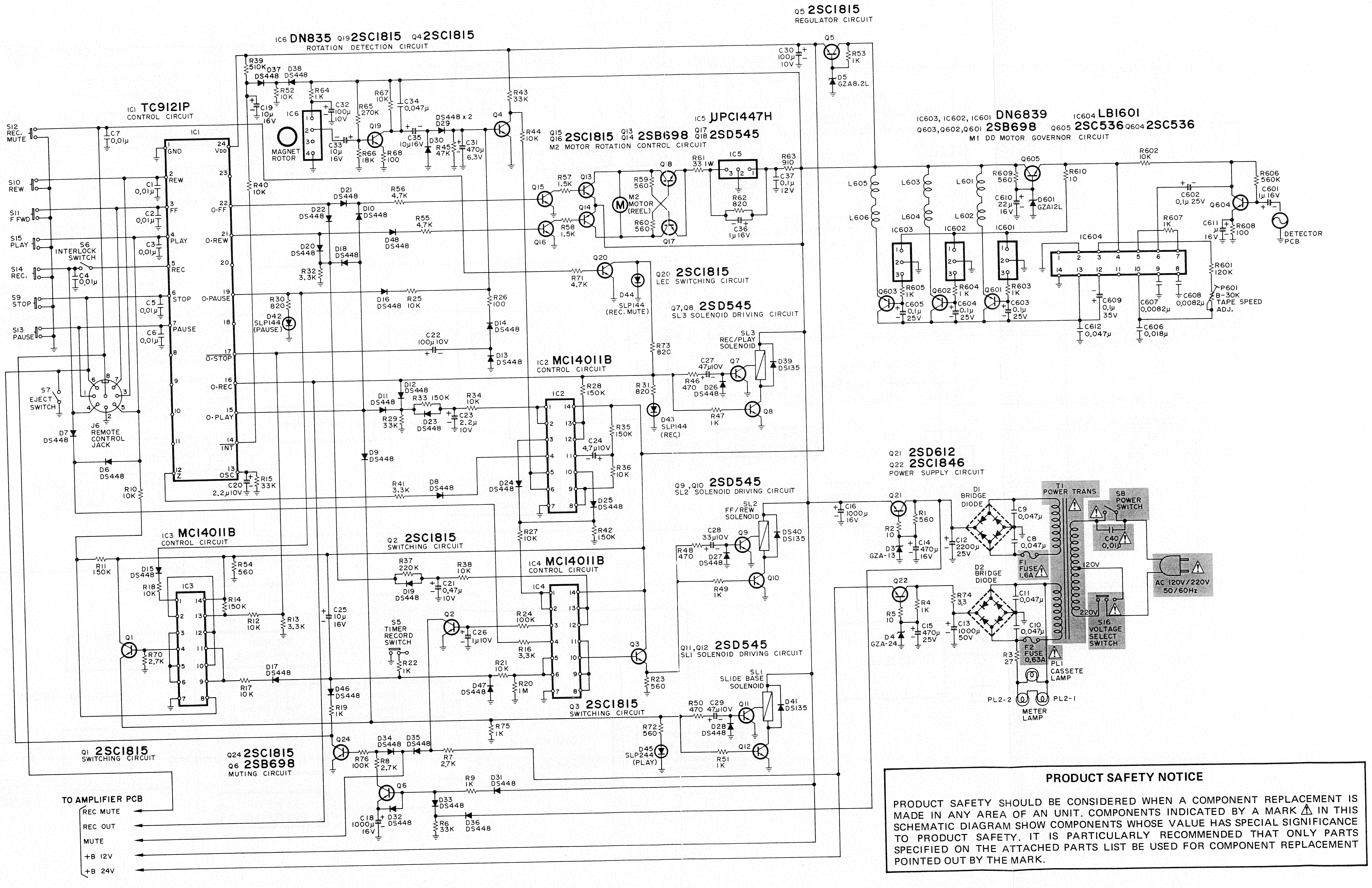

S5
TIMER RECORD SWITCH
R22
D47
WHITE
BLACK
BLUE
PINK
YELLOW
WHITE/BLUE
WHITE/PINK
WHITE/YELLOW
SL2
FF/REW SOLENOID
SL1
SLIDE BASE SOLENOID
HALL IC PCB
RED
WHITE
YELLOW/RED
COUNTER
IC6
S7
EJECT
SWITCH
S6
INTERLOCK
SWITCH
BROWN
VIOLET
METER LAMP
PL2-2
(RIGHT)
PL2-1
(LEFT)
ORANGE
SUB CONTROL PCB
WHITE
YELLOW/RED
RED
GREEN
BLACK
GRAY
ORANGE
M2
REEL MOTOR
SL3
REC/PLAY SOLENOID
RED/PINK
RED/BLUE
RED/YELLOW
TO FUNCTION
SWITCH PCB
CN1
CN2
CN3
CN4
CHASSIS
PL1
CASSETTE LAMP
S8
POWER SWITCH
C40
DD MOTOR GOVERNOR PCB
TO AMPLIFIER PCB
+B12V
GROUND
+B 24V
MUTE
REC OUT
REC MUTE
CONTROL PCB
T1
POWER TRANS
TERMINAL
AC120V/220V
50/60Hz
S9
VOLTAGE SELECT SWITCH
220V◄►120V
Q21

SCHEMATIC DIAGRAM(Amplifier Section)


J4-1 LINE IN (LEFT)
J1 MIKE JACK (LEFT)
J7 DIN REC/PLAY
HD1-1 REC/PLAY HEAD
LEFT CH.
Q101, Q102 2SC693 PRE AMP
VR101 A-50K INPUT LEVEL CONTROL
IC101 LM1011 DOLBY NR CIRCUIT
L105 DOLBY FILTER
Q108 2SC1815 TIME CONSTANT SWITCHING CIRCUIT
Q110 Q111 Q112 2SC1815
Q103, Q104 2SC693
Q113, Q114, Q115 2SC1815 RECORD AMP
P106 B-20K REC/PB SENS. ADJ.
Q109 2SC1815 Q106 2SD1012 MUTING CIRCUIT
J5-1 LINE OUT (LEFT)
J3 HEADPHONES
Q105 2SC693 HEADPHONE AMP
Q116 2SC1815 METER AMP
METER ADJ.
ME1-1 METER
J4-2 LINE IN (RIGHT)
J2 MIKE JACK(RIGHT)
HD1-2 REC/PLAY HEAD
RIGHT CH.
Q201, Q202 2SC693 PRE AMP
VR201 A-50K INPUT LEVEL CONTROL
IC201 LM1011 DOLBY NR CIRCUIT
L205 DOLBY FILTER
Q208 2SC1815 TIME CONSTANT SWITCHING CIRCUIT
Q210 Q211 Q212 2SC1815
Q203, Q204 2SC693
Q213, Q214, Q215 2SC1815 RECORD AMP
P206 B-20K REC/PB SENS. ADJ.
Q209 2SC1815 Q206 2SD1012 MUTING CIRCUIT
J5-2 LINE OUT (RIGHT)
Q205 2SC693 HEADPHONE AMP
Q216 2SC1815 METER AMP
ME1-2 METER
BIAS ADJ.
P101 B-100K P102 B-100K P103 B-100K
P201 B-100K P202 B-100K P203 B-100K
※METAL : 18.8V
※CrO2 : 14.8V
※NORMAL : 11.0V
D307 SLP114B (NORMAL)
D308 SLP114B (CrO2)
D309 SLP114B (METAL)
T301 OSC TRANS
HD2 ERASE HEAD
Q301, Q302, Q303 2SC1815 OSC CIRCUIT
Q308, Q307, Q306, Q305 2SC1815 PEAK INDICATOR CIRCUIT
(DOLBY) (MIKE INPUT) (OVU) (+3VU) (+6VU)
D313 SLP244B D306 SLP114B D312 SLP114B D311 SLP114B D310 SLP114B
Q207 Q107 2SD1012 Q304 2SC1815 RECORD MUTING CIRCUIT
TO CONTROL CIRCUIT
REC MUTE
REC OUT
MUTE
+B 12V
+B 24V

No.	Name	Position	No.	Name	Position	No.	Name	Position
S1	RECORD/PLAYBACK Switch	PLAYBACK	S3	DOLBY Switch	OFF	S7	EJECT Switch	OFF
S2-1	TAPE SELECT Switch (METAL)	OFF	S4	INPUT SELECT Switch	LINE	S8	POWER Switch	OFF
S2-2	TAPE SELECT Switch (CrO2)	OFF	S5	RECORD TIMER Switch	OFF	S9	VOLTAGE SELECT Switch	220V
S2-3	TAPE SELECT Switch (NORMAL)	ON	S6	INTERLOCK Switch	OFF			

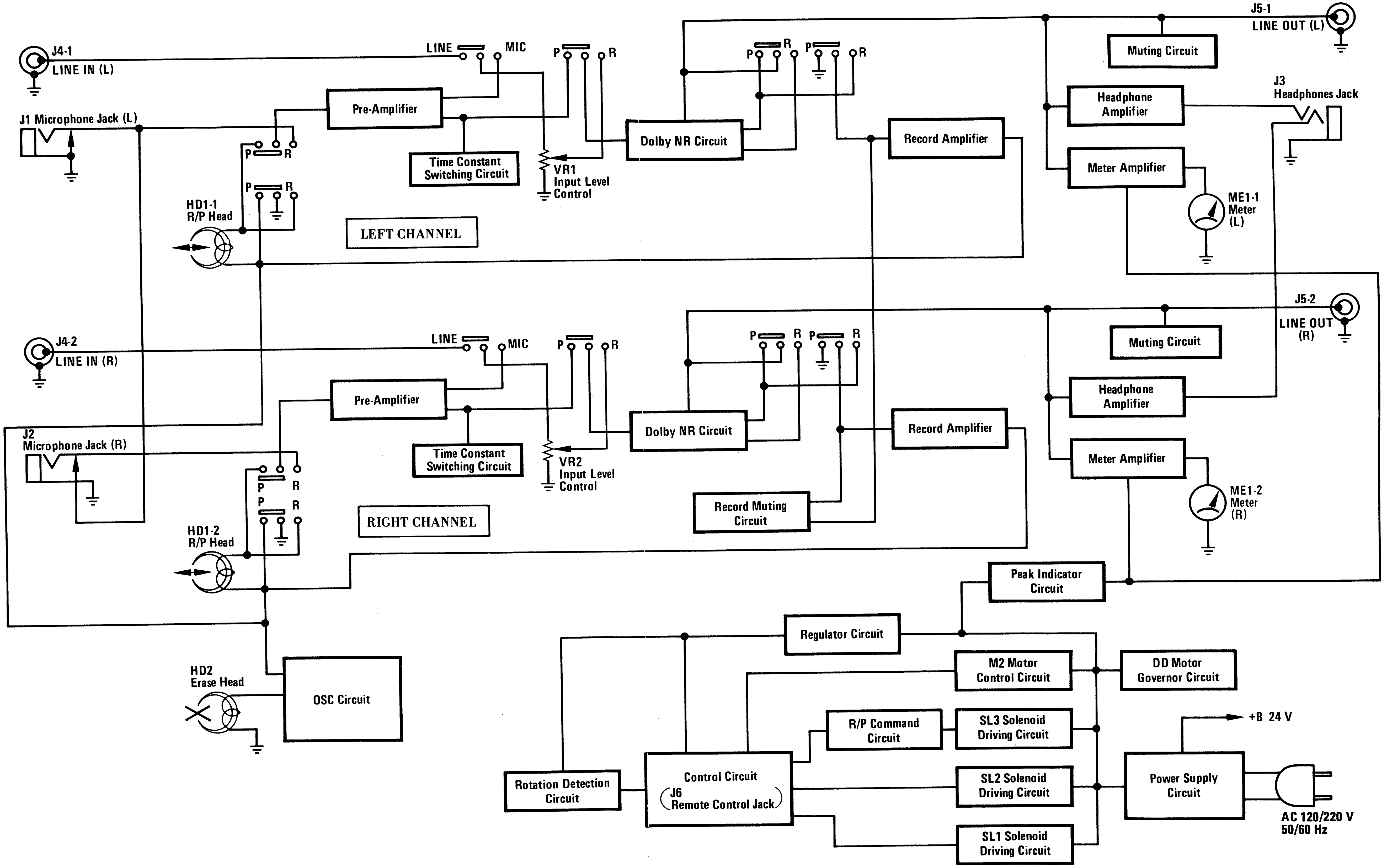
SCHEMATIC DIAGRAM(Control Section)


IC6 DN835 Q19 2SC1815 Q4 2SC1815
ROTATION DETECTION CIRCUIT
Q5 2SC1815
REGULATOR CIRCUIT
IC1 TC9121P
CONTROL CIRCUIT
IC5 μPC1447H
Q15 Q16 2SC1815 Q13 Q14 2SB698 Q17 Q18 2SD545
M2 MOTOR ROTATION CONTROL CIRCUIT
IC603, IC602, IC601 DN6839
Q603, Q602, Q601 2SB698
IC604 LB1601
Q605 2SC536 Q604 2SC536
M1 DD MOTOR GOVERNOR CIRCUIT
DETECTOR PCB
P601 B-30K TAPE SPEED ADJ.
Q20 2SC1815
LED SWITCHING CIRCUIT
Q7,Q8 2SD545
SL3 SOLENOID DRIVING CIRCUIT
SL3 REC/PLAY SOLENOID
IC2 MC14011B
CONTROL CIRCUIT
Q21 2SD612
Q22 2SC1846
POWER SUPPLY CIRCUIT
Q9,Q10 2SD545
SL2 SOLENOID DRIVING CIRCUIT
SL2 FF/REW SOLENOID
IC3 MC14011B
CONTROL CIRCUIT
Q2 2SC1815
SWITCHING CIRCUIT
IC4 MC14011B
CONTROL CIRCUIT
Q11,Q12 2SD545
SL1 SOLENOID DRIVING CIRCUIT
SL1 SLIDE BASE SOLENOID
Q3 2SC1815
SWITCHING CIRCUIT
Q1 2SC1815
SWITCHING CIRCUIT
Q24 2SC1815
Q6 2SB698
MUTING CIRCUIT
S12 REC. MUTE
S10 REW
S11 F FWD
S15 PLAY
S6 INTERLOCK SWITCH
S14 REC.
S9 STOP
S13 PAUSE
S7 EJECT SWITCH
J6 REMOTE CONTROL JACK
S5 TIMER RECORD SWITCH
MAGNET ROTOR
M2 MOTOR (REEL)
D44 SLP144 (REC. MUTE)
D42 SLP144 (PAUSE)
D43 SLP144 (REC.)
D45 SLP244 (PLAY)
T1 POWER TRANS
S8 POWER SWITCH
D1 BRIDGE DIODE
D2 BRIDGE DIODE
F1 FUSE 1.6A
F2 FUSE 0.63A
120V
220V
AC 120V/220V 50/60Hz
S16 VOLTAGE SELECT SWITCH
PL1 CASSETE LAMP
PL2-2 PL2-1
METER LAMP
TO AMPLIFIER PCB
REC MUTE
REC OUT
MUTE
+B 12V
+B 24V

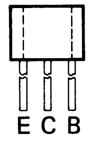
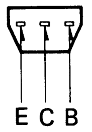
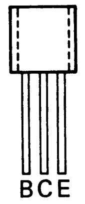
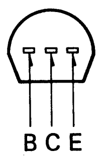
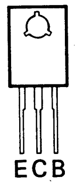
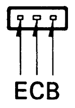
PRODUCT SAFETY NOTICE

PRODUCT SAFETY SHOULD BE CONSIDERED WHEN A COMPONENT REPLACEMENT IS MADE IN ANY AREA OF AN UNIT. COMPONENTS INDICATED BY A MARK ⚠ IN THIS SCHEMATIC DIAGRAM SHOW COMPONENTS WHOSE VALUE HAS SPECIAL SIGNIFICANCE TO PRODUCT SAFETY. IT IS PARTICULARLY RECOMMENDED THAT ONLY PARTS SPECIFIED ON THE ATTACHED PARTS LIST BE USED FOR COMPONENT REPLACEMENT POINTED OUT BY THE MARK.

BLOCK DIAGRAM

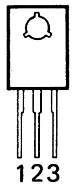
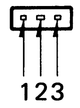
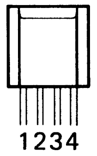
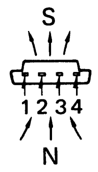
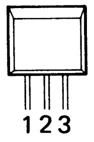
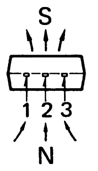

J4-1
LINE IN (L)
J1 Microphone Jack (L)
LINE
MIC
P
R
Pre-Amplifier
Time Constant Switching Circuit
VR1
Input Level Control
Dolby NR Circuit
Record Amplifier
HD1-1
R/P Head
LEFT CHANNEL
J5-1
LINE OUT (L)
Muting Circuit
J3
Headphones Jack
Headphone Amplifier
Meter Amplifier
ME1-1
Meter
(L)
J4-2
LINE IN (R)
J2
Microphone Jack (R)
Pre-Amplifier
Time Constant Switching Circuit
VR2
Input Level Control
Dolby NR Circuit
Record Amplifier
Record Muting Circuit
HD1-2
R/P Head
RIGHT CHANNEL
J5-2
LINE OUT
(R)
Muting Circuit
Headphone Amplifier
Meter Amplifier
ME1-2
Meter
(R)
Peak Indicator Circuit
HD2
Erase Head
OSC Circuit
Regulator Circuit
M2 Motor Control Circuit
DD Motor Governor Circuit
R/P Command Circuit
SL3 Solenoid Driving Circuit
+B 24 V
Rotation Detection Circuit
Control Circuit
(J6 Remote Control Jack)
SL2 Solenoid Driving Circuit
Power Supply Circuit
AC 120/220 V
50/60 Hz
SL1 Solenoid Driving Circuit

IC & TRANSISTOR LEAD IDENTIFICATION

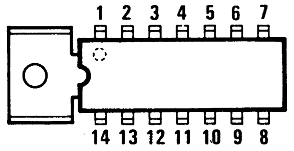
FRONT VIEW	BOTTOM VIEW	TRANSISTOR
		2SD1012
		2SB698 2SC536 2SC693 2SC1815 2SD545
		2SC1864 2SD612

TERMINAL NAME

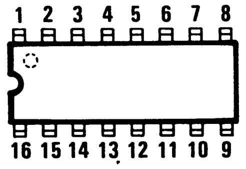
B⇒ BASE
C⇒ COLLECTOR
E⇒ EMITTER

FRONT VIEW	BOTTOM VIEW	IC
		μPC1447H
		DN835
		DN6839

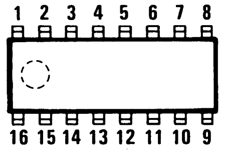
LB1601 BOTTOM VIEW


1 2 3 4 5 6 7
14 13 12 11 10 9 8

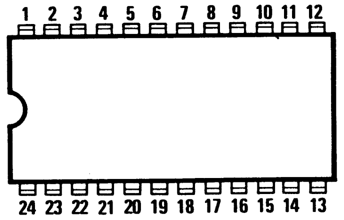
NE646B BOTTOM VIEW


1 2 3 4 5 6 7 8
16 15 14 13 12 11 10 9

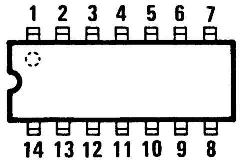
LM1011 BOTTOM VIEW


1 2 3 4 5 6 7 8
16 15 14 13 12 11 10 9

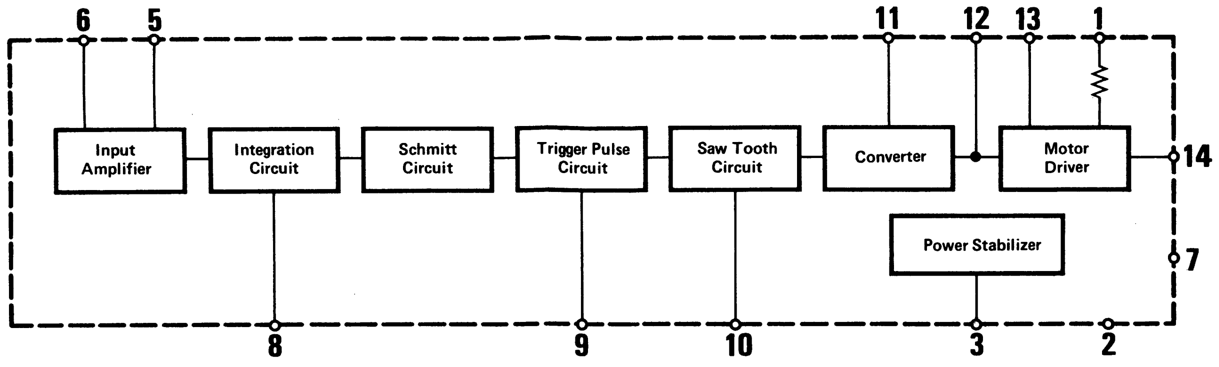
TC9121P BOTTOM VIEW


1 2 3 4 5 6 7 8 9 10 11 12
24 23 22 21 20 19 18 17 16 15 14 13

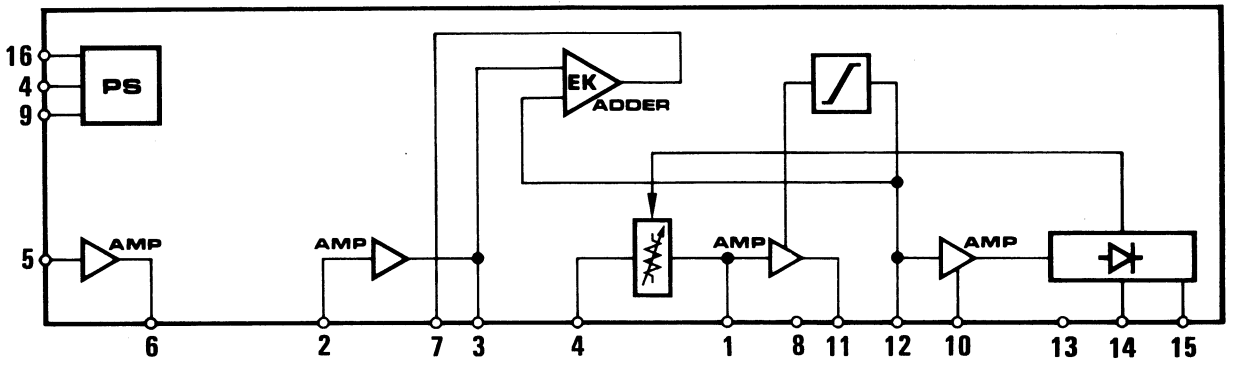
MC14011B BOTTOM VIEW


1 2 3 4 5 6 7
14 13 12 11 10 9 8

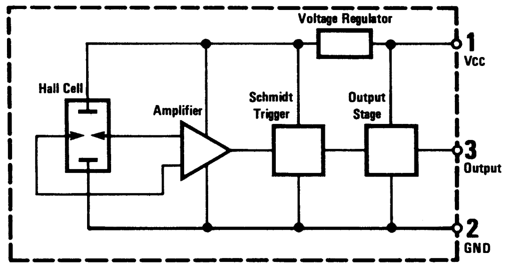
LB1601 BLOCK DIAGRAM


6
5
11
12
13
1
Input Amplifier
Integration Circuit
Schmitt Circuit
Trigger Pulse Circuit
Saw Tooth Circuit
Converter
Motor Driver
14
Power Stabilizer
7
8
9
10
3
2

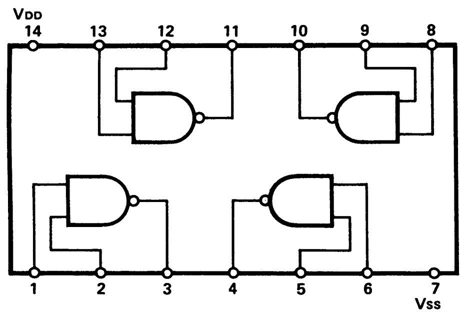
NE646B/LM1011 BLOCK DIAGRAM


16
4
9
PS
EK
ADDER
5
AMP
AMP
AMP
AMP
6
2
7
3
4
1
8
11
12
10
13
14
15

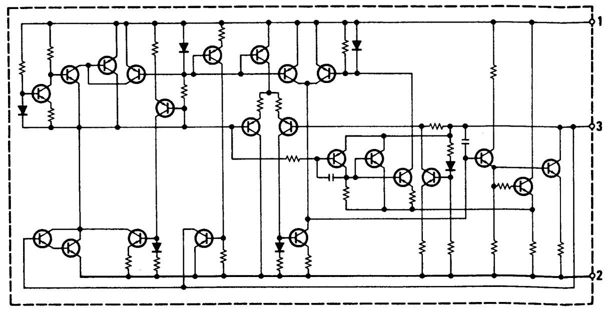
DN6839 BLOCK DIAGRAM


Voltage Regulator
1
Vcc
Hall Cell
Amplifier
Schmitt Trigger
Output Stage
3
Output
2
GND

MC14011B BLOCK DIAGRAM


VDD
14
13
12
11
10
9
8
1
2
3
4
5
6
7
Vss

μPC1447H EQUIVALENT CIRCUIT



DN835 EQUIVALENT CIRCUIT